



**MAJOR PROJECT ASSESSMENT:  
REDEVELOPMENT OF BONNYRIGG  
HOUSING ESTATE (BONNYRIGG LIVING  
COMMUNITIES PROJECT)**

***Land bounded generally by Bonnyrigg  
avenue, Bonnyrigg public school,  
Bonnyrigg plaza, Elizabeth drive,  
Cabramatta road west, Humphries road  
and Edensor road (excluding privately  
owned lots located within the Estate)***

***Proposed by  
BONNYRIGG PARTNERSHIPS***

Director-General's  
Environmental Assessment Report  
Section 75I of the  
*Environmental Planning and Assessment Act 1979*

*(prepared by Fairfield City Council under instrument  
of delegation dated 11<sup>th</sup> April 2007 )*

September 2008



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# 1 EXECUTIVE SUMMARY

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## 1.1 Overview

This is a report on an application seeking approval for a Concept Plan for the renewal of the Bonnyrigg Housing Estate and Project Application for the construction of Stage 1, comprising the subdivision and construction of 106 dwellings and associated infrastructure works.

Bonnyrigg Partnerships (the Proponent) is proposing the redevelopment of Bonnyrigg Housing Estate located at land generally bounded by Bonnyrigg Ave, Bonnyrigg Public School, Bonnyrigg Plaza, Elizabeth Drive, Cabramatta Road West, Humphries Road and Edensor Road (excluding privately owned lots within the estate) ("the proposal").

The redevelopment of the estate shall be undertaken through a public private partnership arrangement between the Department of Housing and Bonnyrigg Partnerships. Accordingly the site will comprise both public and private housing with public housing comprising 30% and private housing comprising 70% dwelling distribution within the site. Bonnyrigg Partnerships will manage the site for a period of 30 years.

The concept plan comprises the development of 2,332 dwellings to be developed in 18 stages over a period of 13 years. This includes 699 public and 1633 private dwellings. Overall densities will be in the form of a mixed development format including 6-storey lifted apartments, buildings containing multiple dwellings including 8-plex, 6-plex, 4-plex, 3-plex, duplex and single dwelling arrangements. The site will comprise of a 'multi-purpose centre' which will house a community centre, commercial/retail shops and administration offices of the proponent. The development proposes the retention of some roads within the estate and the upgrading and creation of new roads. The development also proposes to reconfigure and rationalise the open space areas resulting in the creation of 9 parks. A recycled water system will be connected throughout the site, including connection to the dwellings.

The project application proposes the development of stage 1 comprising the construction of 106 dwellings including the subdivision to create 106 lots. The proposed dwellings will consist of 71 private and 35 public dwellings. The density proposed will be in the form of 2-storey buildings (with some 3-storey elements) comprising 4-plex, 3-plex, duplex and single dwelling arrangements. It is also proposed to reconfigure part of the existing open space and retain/embellish sporting facilities. A stormwater detention basin (8,000m<sup>3</sup>) is proposed within the new park and the installation of a recycled water main will be provided through the entire development. Landscaping and road works are also proposed for the stage 1 project application.

The estimated project cost of the development is \$460 million for the concept plan and \$31 million for the Stage 1 Project Application. The proposal will create 265 full time equivalent construction jobs, 111 on-going maintenance jobs, and 575 resident expenditure jobs.

During the exhibition period, the Council received a total of 9 submissions from public authorities and 50 submissions from the public including a submission by Fairfield City Council. Key issues considered in the Council's assessment included:

1. Urban design and dwelling design matters
2. Safety and security
3. Social impacts and community services
4. Open space and recreation
5. Transport, accessibility, traffic and parking issues
6. Infrastructure issues
7. Environmental issues
8. Economic issues

The Council as the delegate of the Director General of the Department of Planning has assessed the merits of the project and is satisfied that the impacts of the proposed development have been addressed via the Proponent's Statement of Commitments and the Council's recommended conditions of consent, and can be suitably mitigated and/or managed to ensure a satisfactory level of environmental performance. On these grounds, the Council is satisfied that the site is suitable for the proposed development and that the project will provide environmental, social and economic benefits to the region.

The proposal has met all statutory requirements however this report recommends modifications to the Concept Plan in the form of conditions of consent to further mitigate environmental, social and economic impacts not identified in the Statement of Commitments. Furthermore, this report also recommends that all outstanding matters raised by the RTA shall be addressed and resolved in relation to the apportionment issue and requirement of upgrading the local road system. This matter has not been resolved at the time of this report. On this basis, it is recommended that this matter be negotiated between the relevant parties, that is, the RTA, Proponent and the Department of Planning, with a view to seeking resolution as to the required works that will form a condition of consent to this development or other suitable arrangements.

The Council as the delegate of the Director General recommends that the project be approved, subject to modifications with respect to the Concept Plan and conditions in relation to the Stage 1 Project Application.

## GLOSSARY

<b>ARI</b>	Average Recurrence Interval
<b>BLC</b>	Bonnyrigg Living Communities
<b>BP</b>	Bonnyrigg Partnerships (Proponent)
<b>CRSP</b>	Community Renewal Services Plan
<b>DCP</b>	Development Control Plan
<b>DGR</b>	Director-General's Environmental Assessment Requirements
<b>DOH</b>	Department of Housing
<b>EAR</b>	Environmental Assessment Report
<b>EPI's</b>	Environmental Planning Instruments
<b>FCC</b>	Fairfield City Council
<b>IHAP</b>	Independent Hearing & Assessment Panel
<b>ISDP</b>	Infrastructure & Services Delivery Plan
<b>LEP</b>	Local Environmental Plan
<b>PMF</b>	Probable Maximum Flood
<b>RTA</b>	Roads & Traffic Authority
<b>SIA</b>	Social Impact Assessment
<b>SoC</b>	Statement of Commitments
<b>TMAP</b>	Transport Management Accessibility Plan
<b>VPA</b>	Voluntary Planning Agreement
<b>WSUD</b>	Water Sensitive Urban Design

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## 2 BACKGROUND

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### 2.1 THE SITE

#### 2.1.1 Site context and location

The site, generally bounded by Bonnyrigg Ave, Bonnyrigg Public School, Bonnyrigg Plaza, Elizabeth Drive, Cabramatta Road West, Humphries Road and Edensor Road (excluding privately owned lots within the estate), is located within the local government area of Fairfield and is owned by the Department of Housing.

The site has a total area of 81 hectares and presently contains 833 social housing dwellings comprising 802 public housing dwellings (including 31 community housing and Aboriginal housing dwellings) and 86 privately owned dwellings (not part of the proposal) scattered throughout the estate. The site also contains a series of open space systems connected via a series of walkways and cul-de-sacs. The estate has been configured in the 'radburn' style.

Bonnyrigg Estate is located within a predominantly residential area with residential subdivisions surrounding the estate to the north-east (suburb of St John's Park), south-east and south (suburb of Mount Pritchard) and south-west (suburb of Bonnyrigg Heights) of the site. A linear open space system is located to the north-east on the opposite side of Edensor Road, including St John's Park, which comprises both passive and active recreation facilities. The St John's Bowling Club is located adjacent to the open space, and the Jadran Hajduk Club adjoins the estate to the north and is opposite St John's Park.

The site adjoins Bonnyrigg Plaza to the west, which is a single level district shopping centre, comprising a discount department store, supermarket and specialty shops, comprising of a total retail area of 20,100m<sup>2</sup>. A Bunnings Warehouse and Westbus bus depot are situated to the west, and an Aldi store and other industrial and commercial uses are situated to the south-west of the site.

Bonnyrigg Community Centre and Library are located within Bonnyrigg Plaza and Bonnyrigg Youth Centre and Bonnyrigg Child care centre are located adjoining Bonnyrigg Public School and Bonnyrigg Plaza.

There are a number of religious and culturally significant sites in close proximity of the estate which includes the Khmer Temple along Tarlington Parade and adjoining the Bonnyrigg Public School and Bonnyrigg Plaza, Vietnamese Temple and Turkish Mosque on Bibby's Place, Chinese Temple on Cabramatta Road, Catholic Church on Humphries Road, Anglican Church on Edensor Road, Lao Temple and Parkside Church on Smithfield Road.

Bonnyrigg Public School adjoins the north-western boundary of the site, and Bonnyrigg High School is located to the south on the opposite side of Cabramatta Road. St John's Park Primary School is located to the north-east on Edensor Road and Our Lady of Mt Carmel Primary School is located to the east on the corner of Humphries and Cabramatta Road.

The Liverpool to Parramatta Bus Transitway is located to the north-west of the estate and the bus station is located along Bonnyrigg Ave and opposite Bonnyrigg Plaza. The nearest train station is Cabramatta station located 4.5 kilometres from the site to the east. The site is well serviced by buses which includes services to and from Cabramatta station.

Bonnyrigg estate is located about 5km west of Cabramatta and 6km south-west of Fairfield. Both are identified as potential major centres under the Metropolitan Strategy. Fairfield Town Centre provides a range of retail and commercial activities, and contains two major shopping complexes (Neeta City and Fairfield Forum) and main street retail. Cabramatta Town Centre is a unique and diverse competitive market place comprising of a range

of small businesses specialising in fabric, tailors, footwear, jewellery, electronics and home wares. Cabramatta Town Centre also has over 60 eateries offering cuisine from Vietnam, Thailand, Laos and Cambodia.

Bonnyrigg estate is located approximately 40 kilometres from the Sydney Central Business District. Liverpool is the nearest major regional city located within 6 kilometres of the site and is identified in the Metropolitan strategy as *'providing more lifestyle and work opportunities closer to growing parts of Sydney'*. The estate is also located within reasonable proximity of significant employment lands including the Western Sydney Employment Hub, which is identified in the Sydney Metropolitan Strategy as a major employment centre and is in reasonable proximity to Wetherill Park industrial estate which can be accessed via the Liverpool to Parramatta Transitway.

Access to the Westlink M7 is provided via Elizabeth Drive and access to the M5 Motorway is provided via the Cumberland Highway. The site is also situated in proximity to the Western Sydney Regional Parklands, which is located west of the site.

### **2.1.2 Existing site features**

Bonnyrigg Estate has a total site area of 81 hectares and has two ridges, with open space located on both. The eastern high point is located at the open space area above Bunker Reserve 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 the open space known as Tarlington Reserve. There are presently 2 soccer fields within Tarlington Reserve to the north and a basketball court located south of the Reserve. Tarlington Reserve acts as a drainage channel and connects to St John Park and Clear Paddock Creek located north of the site.

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.

A 450mm diameter trunk water main runs through the development from Edensor Road to Elizabeth Drive. This main is located within the central reserve, 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 are proposed to be retained where possible.

The main sewer carrier within the site is located within the central reserve and is 300mm in diameter.

The existing low voltage electrical supply servicing the site is reticulated through an underground conduit network with several pad mount substations, and a high voltage overhead cable traverses the site.

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

A significant portion of the site is laid out in the 'Radburn' design, with dwellings connected via a network of open space and parks and walkways separated from the vehicle network. The estate presently maintains 833 dwellings scattered throughout the estate. Housing is a mix of cottage style dwellings built from a variety of materials, brick, fibro and weatherboard with traditional front and back yards and super lot town houses with car access provided by cul-de-sacs from the rear with dwellings fronting open spaces. The town houses have high private back fences adjoining both the streets and open spaces.

There are also 86 privately owned dwellings located throughout the estate, with a cluster located around a central section of Tarlington Parade at Louise Place and Emma Close. The privately owned dwellings located within the estate do not form part of the Concept Plan.



*Location of private dwellings within the estate*

There are two main loop roads through the estate, Bunker Parade and Tarlington Parade, which branch out into a series of short roads and cul-de-sacs. The estate is laced with landscaped pedestrian walkways connecting the road system, small pocket parks and the main sports ground within Tarlington Reserve. The estate has many mature trees and a park like feel with extensive grassed areas along the pedestrian routes.

The existing open space area is presently 15.1 hectares. This includes all parks within the estate including the pedestrian walkways into the parks and vacant land that is presently zoned for residential purposes.

The existing population within the estate is presently 2895 (as measured in 2006).

## **2.2 SITE HISTORY**

Originally the land was inhabited by Aborigines of the Dharug Tribe, with the Cabrogal tribe being the band that lived in the Fairfield/Liverpool areas. This tribe prospered until white settlement.

The first land grants were made in 1791 and due to the good soil and network of creeks, pastoral properties, vineyards and orchards prospered in this region. During the 1870's Bonnyrigg and surrounding areas further subdivided their holdings to create smaller lots suitable for family run poultry farms, dairy farms and market gardens. For the next century, Bonnyrigg developed as a prime agricultural district due to its fertile soil and abundance of creeks.

The housing commission, established in 1941, was given powers to acquire land to tackle critical housing shortage as thousands of people resettled after the war. In 1980 the Housing Commission acquired 294 acres of land at Bonnyrigg, bounded by Cabramatta, Edensor, and Smithfield Roads, and embarked on a public housing project known as the Bonnyrigg Estate. The estate was to contain 828 dwellings occupied by public tenants, consisting of a mix of cottages, villas and townhouses, and 99 privately owned dwellings. 18 hectares was proposed to be set aside for open space purposes.

From 1981 to 1986, Bonnyrigg experienced a population increase of 121% which prompted the development of playing fields, recreational areas, a neighbourhood centre, community hall, library, health centre, shopping centre and a number of schools within the immediate surrounding of the housing estate.

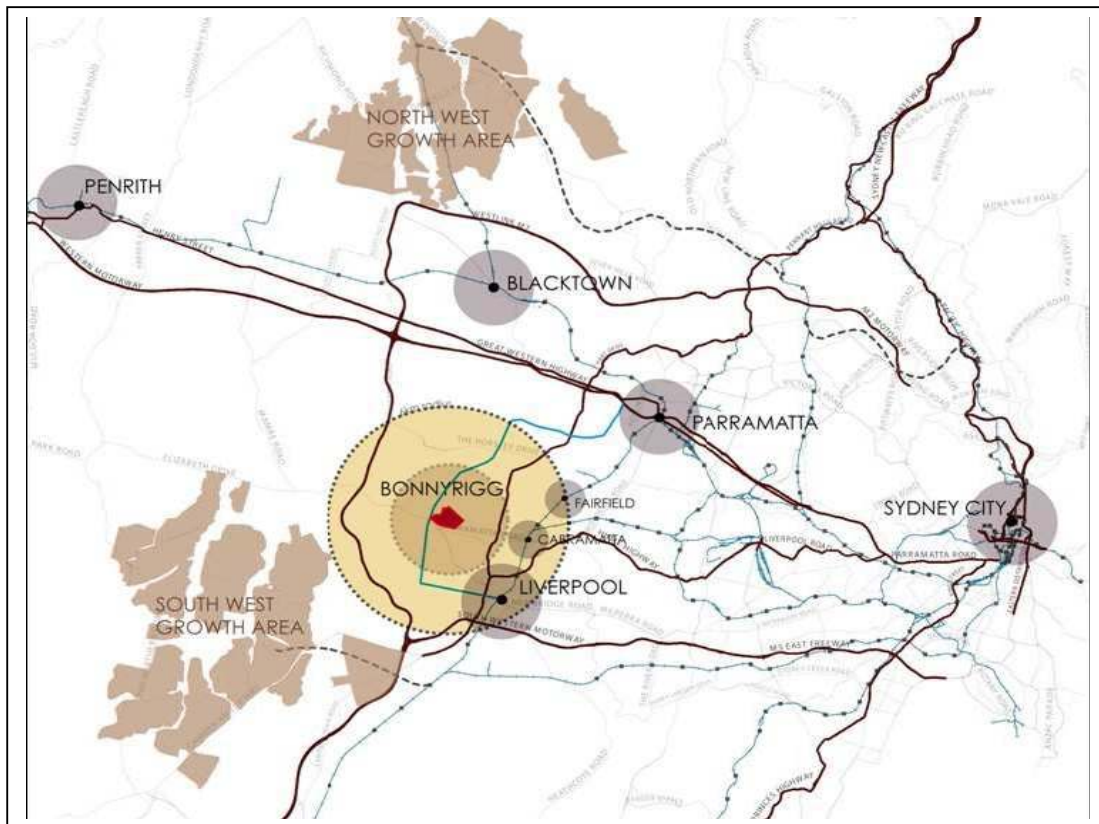
As previously indicated in section 2.1 of this report, the estate has a site area of 81 hectares, comprises 833 dwellings for public housing and 86 privately owned dwellings, and contains 15.1 hectares of open space.

The estate however has seen significant decline in recent years due to the failure of the 'radburn' design layout of the estate. There are areas of poor quality and under-utilised open space and locations which are not safe or accessible to the public. Under the former Neighbourhood Improvement Program, refurbishment of housing in selected sections of the estate occurred including the realignment of houses to a more conventional orientation in areas around the southern end of Tarlington Parade. However, the majority of the estate has not been upgraded and most dwellings are in need of maintenance or repair.

In December 2004, the NSW Minister for Housing announced the redevelopment of Bonnyrigg through a public-private partnership.

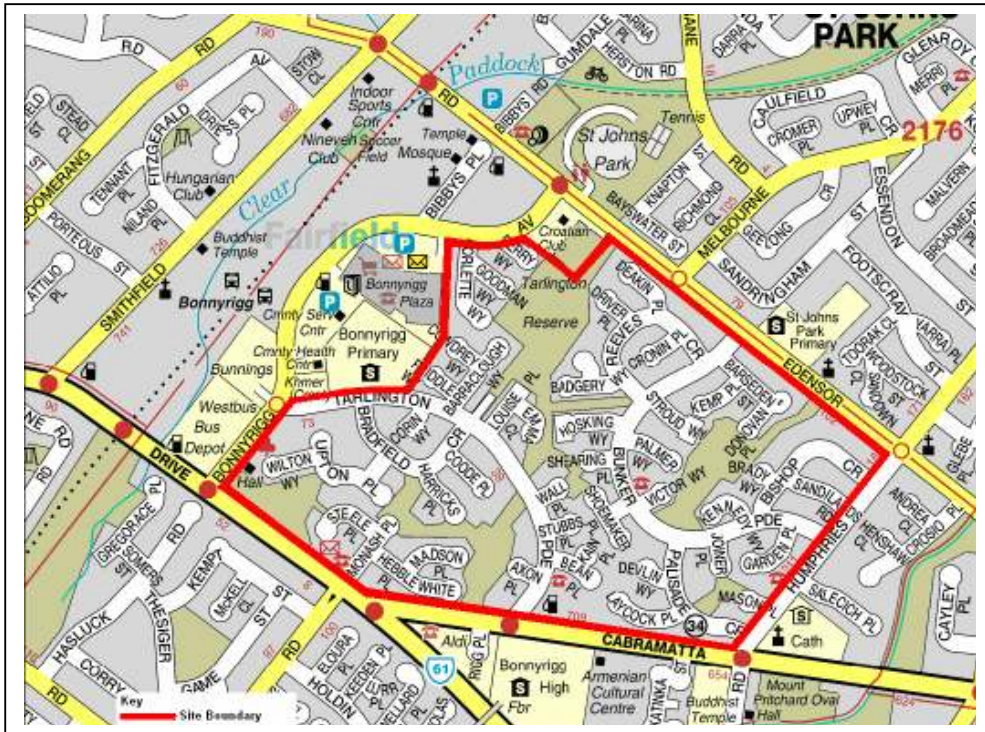
In November 2006, Bonnyrigg Partnerships consortium is selected as the preferred proponent for the project.

In November 2007, a Concept Plan and Project Application were lodged under Part 3A of the Environmental Planning and Assessment Act, 1979, for consideration. On the 11<sup>th</sup> April, 2007, the Minister for Planning delegated all assessment powers in relation to the project to Fairfield City Council, although the minister retains the consent role in this matter.



Greater Sydney Region





Extract from UBD Map



Aerial Photograph

### 3 PROPOSED DEVELOPMENT

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This is an application for approval to carry out the redevelopment of the Bonnyrigg Housing Estate in 18 stages over a period of 13 years. A Concept Plan has been lodged for the redevelopment of the whole estate and a Project application has been submitted proposing the development and construction of Stage 1.

Essentially, the application comprises of two components, that is, the Concept Plan and Project Application. In this regard, details of each aspect of the application will be discussed separately for the purposes of this section of the report.

#### 3.1 CONCEPT PLAN

The concept plan comprises the following;

- Demolition of existing dwellings in stages. The concept plan proposes to demolish 813 of the public housing dwellings while retaining 20 dwellings owned by Housing NSW. All 86 privately owned homes will be retained. Demolition will be undertaken in accordance with the Demolition Staging Plan included in the Masterplan.
- Retention of privately owned homes and approximately 50% of roads.
- Staged construction of approximately 2,332 dwellings in 18 stages over 13 years, including apartments, attached homes (in 2, 3, 4, 6, and 8-plex configurations) and detached homes, comprising 70% private dwellings and 30% public dwellings to achieve targets set by Housing NSW.
- Staged construction of the Community Precinct, comprising community, retail and commercial activities, to be located approximately in the centre of the site, between Tarlington Reserve and Bunker Ave and adjacent to Valley Park. The neighbourhood centre will provide offices for Bonnyrigg Partnerships including tenancy management services and a central base for personnel involved in the project, a community centre which will provide flexible office space and meeting rooms to cater for community groups and users, a limited range of retail and commercial uses that serve the needs of local residents, and a community garden to be developed in conjunction with local residents.
- Reconfiguration and upgrade of existing public open space, including extensive landscaping and infrastructure works to meet the needs of existing and future residents with regard to quantity and quality of open space, including passive and active recreation opportunities. The total area of open space proposed is 12 hectares which will be distributed throughout the estate with the creation of 9 parks. The proposed parks will be upgraded and embellished with active and passive recreation facilities including children's play equipment, public seating, playing fields, basketball courts, BBQ areas, shade structures, pedestrian (1.2m wide) and shared (2.5m wide) pathways, amenities buildings, open turf areas for active play, landscape works amongst other facilities. The concept plan also proposes to provide a 30% tree canopy cover throughout the site.
- Retention and upgrade of existing roads, construction of new roads and provision of a pedestrian and bicycle movement network. The two main roads, Tarlington Parade and Bunker Parade will be retained, and a **new link road** will be constructed between these two roads to connect both sides of the estate. Bunker Parade will be realigned to form the boundary of Valley Park (currently known as Tarlington Reserve). The proposed Community Precinct will be located along the new link road. The road network hierarchy will consist of local collector roads (between 15 to 18m), local access streets (between 10.5m to 20m) and local access places (between 8m to 15m) proposed in varying widths. A shared way (pedestrian/cycle paths) will be provided along specific roads within the estate via the integrated pedestrian and bicycle network which will also include connections through the public open space network. Approximately 4,500m in length and 74,000m<sup>2</sup> of resealed pavement of existing roads will be upgraded and resealed. Approximately 8,200m in length and 105,000m<sup>2</sup> of constructed pavement of new roads will be provided and approximately 27,400m<sup>2</sup> of new or replaced footpath, including shared pedestrian/cycle links will be provided. The following figure shows the proposed road network and road hierarchy.





*Proposed road network and road hierarchy*

- **Stormwater infrastructure** works including water sensitive urban design measures to control the quantity and quality of stormwater, by incorporating retention and bio-filtration techniques to improve the quality of stormwater run off. This will include the establishment of roadside tree bays to form rain gardens to collect road runoff prior to discharge into a piped system, installation of gross pollutant traps, piped outlets to Tarlington Reserve to discharge above ground to rain gardens or linear creek lines amongst other initiatives.
- Retention, extension and upgrades of existing services infrastructure to maintain supply through construction and cater for the increased population. This will include the following;
  - **Stormwater** – retention of some existing stormwater infrastructure and upgrade of the major and minor systems including construction of a stormwater detention facility, water control facilities including wetlands, rain gardens, bio-retention swales and sinks, construction of new minor road stormwater systems and sub-soil drainage within new roads and proposed tree wells.
  - **Potable water** – retention of majority of existing pipes and provision of new connections to the existing system. Potable water service upgrades, including a pumping station and external pipeline may be required in future stages pending the results of a Section 73 application and modelling by Sydney Water.
  - **Recycled water** – a recycled water main system will be laid along the potable water main in new roads and on opposing sides of existing roads to minimise service disruption. Recycled water may be provided by Sydney Water or an alternate service provider, pending commercial negotiations. Recycled water is proposed to be connected to all washing machines, toilets and for irrigation purposes. The recycled water system is unlikely to be available at Stage 1 of the development and it is not proposed to install water tanks to comply with BASIX requirements. In this regard, it is proposed to construct recycled water infrastructure with each stage and this infrastructure will be connected to the potable water supply temporarily until the recycled supply becomes available. It is not understood at this stage, when supply of recycled water will become available to service the site.
  - **Sewer** – retention of the existing sewer where possible and extended where necessary. Sewer main upgrades will be carried out on and off the site to service the increased population.
  - **Telecommunications** – retention of some existing telecommunications infrastructure and provision of new services in a shared trench arrangement with electrical, broadband and gas reticulation.

- **Gas** – retention of existing services and extension of services as part of a shared trenching arrangement with Alinta.
- **Electrical** – retention of existing electrical services, where possible, and provision of new services as part of the shared trenching arrangement and undergrounding of High Voltage as it crosses the estate. Integral Energy has a planned upgrade of the zone substation within three years. No additional off-site major works solely servicing the renewal area are anticipated.
- Housing mix – The concept plan proposes a mix of dwelling types including detached housing, attached dwellings in the form of duplex, 3-plex, 4-plex, 6-plex and 8-plex. All detached and attached housing will be predominantly 2-storey in height with some 3 storey elements in key locations. Apartment buildings are also proposed and will be constructed to a maximum height of 6 storeys.
- Detached and attached homes comprise the majority of the masterplan site. The housing character of these buildings is within the suburban vernacular of the surrounding suburbs. The materials of the dwellings will be a mixture of brick and render.
- The Dwelling yield and mix for the redevelopment is proposed as shown in the following table;

Mix	Dwelling Type	Lots (comprising torrens, community & strata title)	Dwellings (No.)	Private (No. and % of total dwelling type)	Public (No. and % of total dwelling type)
10%	Retirement	230	230	230 (10%)	0 (0%)
12%	Lifted Apartments	296	296	124(5%)	172 (7%)
5%	8 Attached Dwellings	112	112	96 (4%)	16 (1%)
10%	6 Attached Dwellings	240	240	174 (8%)	66 (3%)
20%	4 Attached Dwellings	468	468	348 (15%)	120 (5%)
13%	3 Attached Dwellings	298	298	196 (8%)	102 (4%)
15%	2 Attached Dwellings	342	342	190 (8%)	152 (7%)
10%	Houses	240	240	189 (8%)	51 (2%)
4%	Existing Private	86	86	86 (4%)	0 (0%)
1%	Retained Public Villas	20	20	0 (0%)	20 (1%)
<b>100%</b>	<b>Total</b>	<b>2,332</b>	<b>2,332</b>	<b>1,633 (70%)</b>	<b>699 (30%)</b>



- **Densities** – There are two proposed apartment precincts. One is located adjoining Bonnyrigg Plaza to the north-west of the site and will include seniors living housing, and the other is located to the south-west in proximity to Bonnyrigg Public School and the Khmer Temple. Attached housing will be provided mainly to the east of the site with detached housing mainly located to the west of the site. The following figure shows the proposed density distribution in plan form as follows;



- **Staging** – The following figure shows the proposed 18 stages to occur over a 13 year period as follows;



#### Indicative Staging Plan

- The redevelopment proposes to comply with BASIX requirements and exceed these standards where possible through the provision of proposed stretch targets. The following table outlines how this will be achieved.

### Energy Efficiency

Energy Efficiency		
Criteria	Base Target	Stretch Target
BASIX Energy Score / Greenhouse Gas Emissions	Compliance with the minimum BASIX requirements (35 or 40% reduction in per capita CO <sub>2</sub> emissions compared to the national average as quantified by BASIX depending on dwelling types)	50% reduction in per capita CO <sub>2</sub> emissions compared to the national average as quantified by BASIX
Peak Electricity Demand	Reduce energy demand through the installation of energy efficient appliances, fittings and fixtures as well as energy efficient dwelling design to mitigate a potential per capita increase in peak electrical demand	Reduce energy demand through the installation of energy efficient appliances, fittings and fixtures as well as energy efficient dwelling design to mitigate the potential need for additional electricity infrastructure to service the increased population

### Water and Wastewater Management

Water and Wastewater Management		
Criteria	Base Target	Stretch Target
BASIX Water Score	Compliance with BASIX water target (40% reduction in per capita potable water use compared to the national average as quantified by BASIX)	60% reduction in per capita potable water use compared to the national average as quantified by BASIX
Quality of Stormwater Leaving the Site	Water Sensitive Urban Design to treat or filter stormwater according to ANZECC guidelines for three month average recurrence interval storm events	N/a
Quantity of Stormwater Leaving the Site	Water Sensitive Urban Design features to avoid increases in stormwater flows for all events up to the 1-in-100-year Average Recurrence Interval events	N/a
Increase the Site-Wide Potable Water Demand following Development	N/a	Reduce potable water demand to mitigate the potential need for additional potable water infrastructure to service the increased population
Increase in Flow to Sewer following Development	N/a	Reduce sewer flows through improved water efficiency to mitigate the potential need for upgrades to sewer infrastructure to service the increased population

### Occupant amenity and thermal comfort

Occupant Health, wellbeing and Amenity		
Criteria	Base Target	Stretch Target
Natural Ventilation	Compliance with minimum SEPP 65 requirement that 60% of dwellings have a dual aspect	Provision of dual aspect facades for no less than 90% of dwellings
Natural Light	Building forms should provide a maximum northerly exposure for as many rooms as possible in each dwelling	Provision of a daylight factor of no less than 25% of 60% of all living spaces
Thermal Comfort	Compliance with BASIX requirements for Thermal Comfort	Design to provide thermal comfort such that a majority of occupants are comfortable for 95% of the year, using the thermal comfort standard ISO7730
Indoor Air Pollutants	Use of low-VOC paints and carpets for all internal wall and ceiling paint and dwelling carpets;  Use of low-formaldehyde MDF	N/a
Shading Devices	Shading devices will be used, such as eaves, awnings, external louvers, and pergolas to filter the summer sun.	N/a

### ESD base and stretch targets

- A Community Services Renewal Plan and Community Services Implementation Plan have been formulated which provides 13 strategies to mitigate social and community impacts as part of the redevelopment of the site. A re-housing strategy has also been developed which sets out guidelines on how re-housing of current residents within the estate will be undertaken. These are discussed in more detail in Section 5 of this report.
- A summary of the key statistics relating to the concept plan is provided in the following table;

	Existing	Proposed	Change (%)
Total Site Area (ha)	79.4	79.4	0
Total Dwellings	919	2,332	+154%
Public Dwellings	833	699	-16%
Private Dwellings	86	1,633	+1,799%
Total Area of Roads (ha)	17.6	17.6	0
Private Areas (ha)	1.7	1.7	0
Net Developable Area (ha)	45.2	48.2	+7%
Dwellings Per Hectare	11.6	29.4	+154%
Dwellings Per Pure Net Hectare	20.3	48.4	+138%
Population	2,895	6,032	+108%

#### Summary of Development Statistics

- A **Voluntary Planning Agreement (VPA)** has been prepared to accompany and support the proposed redevelopment of the Bonnyrigg Estate. Bonnyrigg Partnerships is offering to enter into a VPA with Council, under which it proposes to pay certain monetary contributions and provide certain other material public benefits, on the basis that the application of sections 94, 94A and 94EF of the Act to the development proposed in the Concept Plan application, are excluded. The VPA establishes a range of contributions to be made towards the capital cost or provision or improvement of facilities, infrastructure and services to meet the increased demand arising from the development on the site. The contributions cover the following items:
  - Design and construction of collector road upgrades.
  - Design and construction of local roads adjacent to public open space.
  - Design and construction of cycleways and pedestrian paths.
  - Provision of internal and perimeter bus shelters.
  - Design, construction and embellishment of local open space.
  - Construction and embellishment of works along creek lines.
  - Design and construction of water management facilities and works.
  - Design and construction of a new community centre building and community garden on the site.
  - Contribution to local public art facilities.
  - Contribution to the enhancement of the Bonnyrigg Library.
  - Contribution to youth support programs.
  - Refurbishment of the Bonnyrigg Partnerships office.
- A **Masterplan** document accompanies the Concept Plan application and provides the specific details of how the site will be redeveloped. Specific objectives and development controls have been established that informs the physical redevelopment of the estate. The document sets out the proposed structure and character of the estate (part 3) and provides guidelines for both the public (part 4) and private (part 5) realms. In summary, the public realm section provides guidelines for road hierarchy, trees, pedestrian and bicycle connections, public transport, WSUD and water management,

parks, vegetation management, shade structure and amenities, furniture, sporting and recreational facilities, public art, community garden, site nursery, hardscape materials, and requirements of lighting including operation and maintenance and a lighting masterplan. The private realm section sets out guidelines for housing distribution throughout the estate, development controls in relation to detached and attached housing, apartments and senior living, and guidelines for the Bonnyrigg neighbourhood community centre. In relation to the private realm, the apartment and seniors living precinct will be assessed in accordance with the provisions of SEPP 65 and the accompanying Residential Flat Code and the Seniors Living SEPP. In relation to the attached and detached dwellings, specific development controls have been proposed within the masterplan document. The main controls have been summarised as follows;

- Proposed **lot size** is provided in the following table;

Housing type	Minimum allotment width	Minimum allotment depth	Total area
Detached House	9.5 metres 12.5 metres if twin garage	27.5 metres 27.5 metres	261.25m <sup>2</sup> 343.75m <sup>2</sup>
2 Attached Dwellings	15 metres if garages and car parks located at rear 17 metres if garages located at the street front	30 metres 30 metres	450m <sup>2</sup> (225m <sup>2</sup> per dwelling) 510m <sup>2</sup> (255m <sup>2</sup> per dwelling)
3 and 4 Attached dwellings	20 metres	30 metres	600m <sup>2</sup> (150-200m <sup>2</sup> per dwelling)
6 Attached dwellings	22 metres	30 metres	660m <sup>2</sup> (110m <sup>2</sup> per dwelling)
8 Attached dwellings	28 metres	30 metres	840m <sup>2</sup> (105m <sup>2</sup> per dwelling)

*Proposed lot sizes for attached and detached dwellings*

- **Landscaping area** – minimum 35% of each allotment to be used as landscape area including 30% to be deep soil landscaping.
- **Building footprint** – maximum of 65% of any allotment to be built upon, including garages and carparking spaces.
- **Garage setbacks** – must be setback 5.5m from the street and zero lot setback for rear access from rear boundary. Garages fronting the street to have a maximum combined width to the allotment of no more than 50% and garages fronting a rear access to have no more than 80%.
- **Building height** - no more than 2-storeys with 3-storey elements permitted in select locations.
- **Ceiling height** – minimum of 2.4m measured from finished floor to finished ceiling level in habitable room.
- **Front setbacks** – 80% of the width of the front elevation of the building to have a minimum setback of 4.5m from the allotment frontage. 20% of the width of the front elevation of the building may be setback a minimum of 1.2m from the allotment frontage.
- **Side and rear setbacks** – 80% of the building footprint must be setback at least 0.9m from the side boundary. Zero lot setback permitted along access places (rear lanes).
- **Private open space** – a minimum of 25m<sup>2</sup> of ground level private open space with a minimum dimension of 4m, or 10m<sup>2</sup> of above ground level open space in the form of a balcony with a minimum dimension of 2.5m.
- **Carparking** – Detached dwellings will provide 2 carparking spaces per dwelling with visitor parking provided on street. Attached dwellings for 1-2 bedrooms will provide 1 carspace and 3+ bedrooms will provide 1.5 car spaces with visitor parking provided on street.
- **Storage** – 1 bedroom dwelling is 6m<sup>3</sup>, 2 bedroom dwelling is 8m<sup>3</sup>, and 3+ bedroom is 10m<sup>3</sup>.

- **Cut and fill** – maximum level of cut must not exceed 1m below natural ground and maximum level of fill must not exceed 1m above natural ground measured at any corner of the building platform.
- **Solar access** – Detached and attached dwellings must be designed to ensure that the living area windows and a minimum of 50% of private open space on both the subject site and any adjoining site receive at least 3 hours of direct sunlight between 9am and 3pm on the 21<sup>st</sup> June.

Table 5 - Concept Plan Application compliance table

	Existing	Proposed	Relevant Development Standard (Fairfield LEP 1994, Bonnyrigg Town Centre DCP No. 28, Fairfield City Wide DCP 2006)	Compliance
Site Area	79.4 hectares	79.4 hectares	N/A	N/A
Height	Single storey	Predominantly 2-storey for attached and detached dwellings	2-storey (Fairfield City Wide DCP 2006 and Bonnyrigg Town Centre DCP No. 28)	Yes
		6 Storeys for Residential Apartments	4-storey (Bonnyrigg Town Centre DCP No. 28)	No
Lot Size	Not available	Detached dwelling – 261.25m <sup>2</sup> - 343.75m <sup>2</sup>	Minimum 450m <sup>2</sup> (Fairfield LEP 1994)	No
		Attached dwelling – 450m <sup>2</sup> - 840m <sup>2</sup>	No minimum (Fairfield LEP 1994)	Yes
Setbacks	Not available	80% of width of building to be minimum 4.5m for both attached and detached dwellings	Detached dwellings = 4.5m (Fairfield City Wide DCP 2006)	Yes
			Attached dwellings = 6m (Fairfield City Wide DCP 2006)	No
Landscaping	Not available	35% landscaped area including 30% deep soil zone for attached and detached dwellings	30% deep soil required for detached dwellings (Fairfield City Wide DCP 2006)	Yes
Building Envelope	Not available	65% including garages and car spaces	FSR = 0.45:1 for both attached and detached dwellings	N/A
Private Open Space	Not available	25m <sup>2</sup> for ground level private open space and 10m <sup>2</sup> for balconies for detached and attached dwellings	Detached dwellings = 80m <sup>2</sup> Attached dwellings = 50m <sup>2</sup> for 2 bedrooms and 60m <sup>2</sup> for 3+ bedrooms	No
Carparking	Not available	1-2 bedroom = 1 carspace 3+ bedroom = 1.5 carspaces No visitor parking proposed	Detached dwelling = 3 carspaces	No
			Attached dwelling = 1-2 bedroom = 1 carspace and 3+ bedroom = 2 carspaces  0.25 visitor carspace required	

The issues of non-compliance as notated in the table are as follows:

1. Height of Residential Flat Buildings does not comply with Precinct 8 controls indicated within the Bonnyrigg Town Centre DCP No. 28 however the DCP indicates that height controls may be varied subject to a detailed Masterplan being undertaken. The Masterplan has indicated that a 6-storey building height in close proximity to the Town Centre is appropriate.
2. Lot sizes of detached dwellings do not comply with the minimum requirement as indicated in Fairfield LEP 1994. The concept plan proposes a medium density development across the estate in varying forms of dwelling types and comparative lot sizes. Accordingly, the proposed lot sizes are considered reasonable for a medium density arranged development.
3. Building setbacks along the street frontage meet the requirements for low density (detached) development but do not meet the minimum standards for Council's medium density standards. Although this may not be within Council's desired requirement, streetscape controls have been adopted to ensure that the streetscape environment is attractive and meets appropriate urban design standards. Specific guidelines have been included in the Masterplan document regarding this aspect of the proposal. Reduced setbacks may be acceptable on the basis of improved streetscape outcomes.
4. Private open space does not meet the standards that Fairfield Council requires for all residential development. Further discussion regarding this matter is discussed in **s.5.5** of this report.
5. Carparking rates do not meet the standards as required in Council's relevant development controls for residential development. Further discussion regarding this matter is discussed in **s.5.18** of this report.

Further discussion of these issues is contained within Section 5 of this report.

### 3.1.1 Project Application (Stage 1)

The project application (Stage 1) comprises the following details;

- The Project Application proposes 2 separate applications, that is, an application for the subdivision of land proposing the creation of 106 lots, and an application for the construction of dwellings within the area identified as Stage 1.
- **Subdivision and Road Layout** - comprises the creation of 106 new lots, comprising a mix of torrens title, strata title and community title lots, depending on the dwelling type to be constructed. The proposed road layout includes the retention and surface upgrade of Reeves Court with connections provided to new streets for improved accessibility across the site. Additionally, the proposed road layout will include a new entry into the site off Edensor Road. This entry will be facilitated by the proposed extension and realignment of Bunker Parade.
- **Dwelling Construction** – Proposes a mixture of detached and attached dwellings with a predominant height of two storeys. However, there is one 'hero' (prominent) dwelling with a minor three-storey building element. There are no residential flat buildings proposed for Stage 1. It is proposed to construct a total of 106 dwellings within Stage 1, including 14 detached dwellings, 20 duplex dwellings, 24 3-plex dwellings and 48 4-plex dwellings. All are two-storey in construction, with the exception of one (1) 'hero' (or prominent) dwelling, which incorporates a three-storey element. The ratio of private to public housing within Stage 1 is equivalent to the ratio of the total redevelopment, being 70% private and 30% public. The social housing provided within Stage 1 will be scattered throughout the site and will not be discernable from the private dwellings. The table on the following page shows the total dwelling yield and mix for stage 1.
- **Public Open Space** - Stage 1 includes the reconfiguration of the existing park in the central valley (a portion of which is currently known as Tarlington Reserve), from Cabramatta Road to Edensor Road. The eastern edge of the reconfigured open space will adjoin the northern realignment of Bunker Parade. The proposed improvements include:
  - Retention and improvement of existing sporting facilities, including a full size soccer field and a junior soccer field, half-basketball court, amenities building (including change room, showers and toilet facilities) and informal seating terraces.
  - Children's play equipment (0-4 year olds and 5-10 year olds), BBQ facilities and shelters for shade and seating.
  - A civic space, including seating and shade areas, to provide facilities for nearby development.

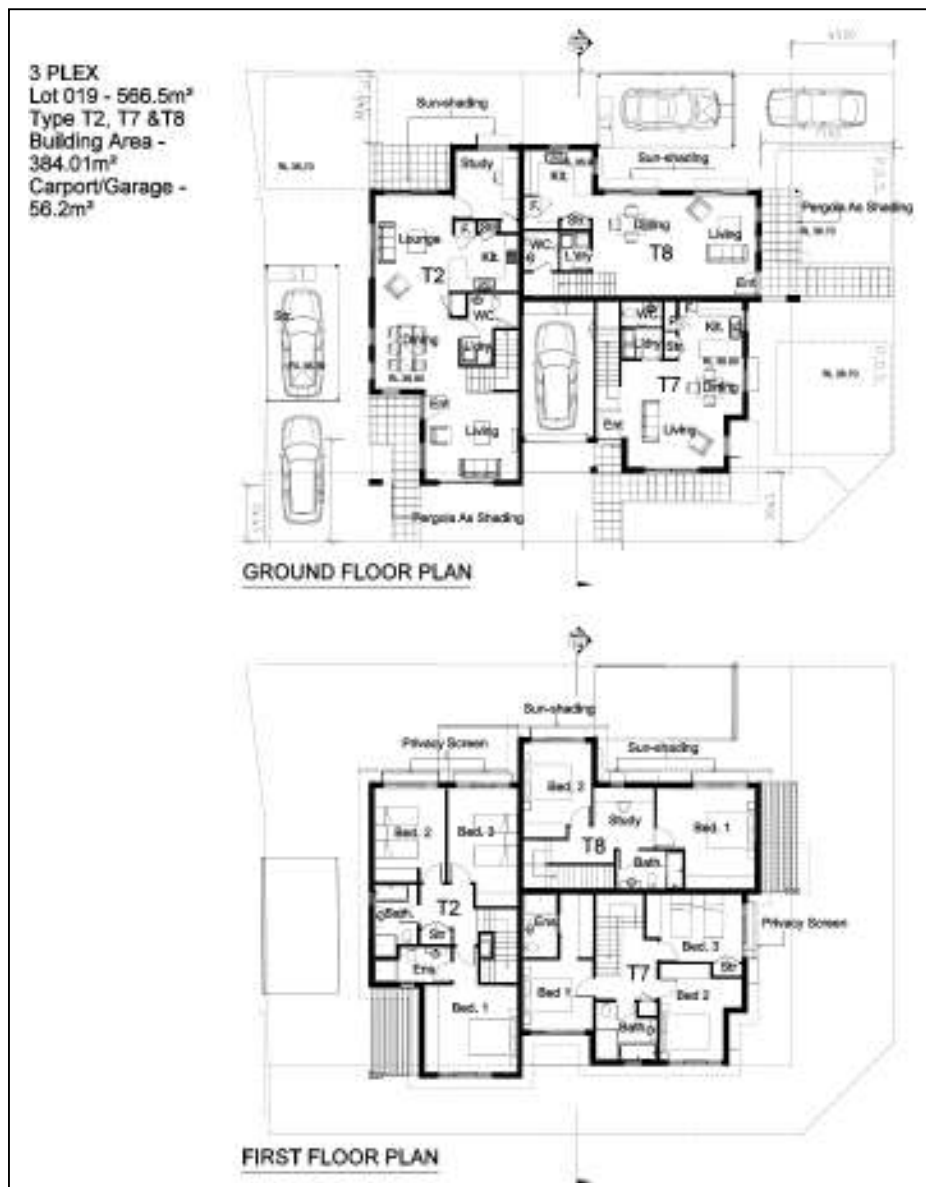
- Integrated pedestrian and bicycle network.
- Formal feature tree avenue along Bunker Parade to highlight the edge of the park.
- Car parking (on street) for proposed soccer fields and general park activities.
- **Stormwater Infrastructure** - A stormwater detention basin with approximately 8,000m<sup>3</sup> of stormwater detention storage will be located in the Central Valley Park and act as a visual entry statement, integrated with the proposed open space infrastructure and landscape treatment. Other stormwater infrastructure works include:
  - A series of water quality control facilities, for treatment of runoff prior to discharge from the site, including wetlands, rain gardens, bio-retention swales and sinks, with a combined approximate area of 2,600m<sup>2</sup>.
  - The construction of a new minor road stormwater system will total approximately 500 metres of pipe and associated pits.
  - Sub-soil drainage provided within the new roads and proposed tree wells will total approximately 1,200 metres of pipe.
- **Utilities and Services** - Utilities and services will be retained and extended where necessary, as summarised below:
  - Potable water – extension and upgrade of existing potable water supply, including approximately 830 metres of new potable water mains.
  - Recycled water – a recycled water main will be laid through the entire development alongside the potable water main in new roads and on opposing sides of the road for existing roads to minimise existing service disruption. The estimated length of recycled water main in Stage 1 is 1,200 metres.
  - Sewer – Stage 1 sewer reticulation and carrier mains will be connected to the existing Sydney Water system, totalling approximately 1,200 metres of new sewer main and associated manholes.
  - Telecommunications – retention and upgrade of existing services as outlined in the Concept Plan, including approximately 800 metres of new cabling for Stage 1.
  - Gas – retention and extension of existing gas supplies as outlined in the Concept Plan, including installation of approximately 1,200m of new gas piping to supply Stage 1.
  - Electrical – new electrical reticulations including approximately 800 metres of conduit and cabling and two new padmount substations are to be provided in Stage 1.

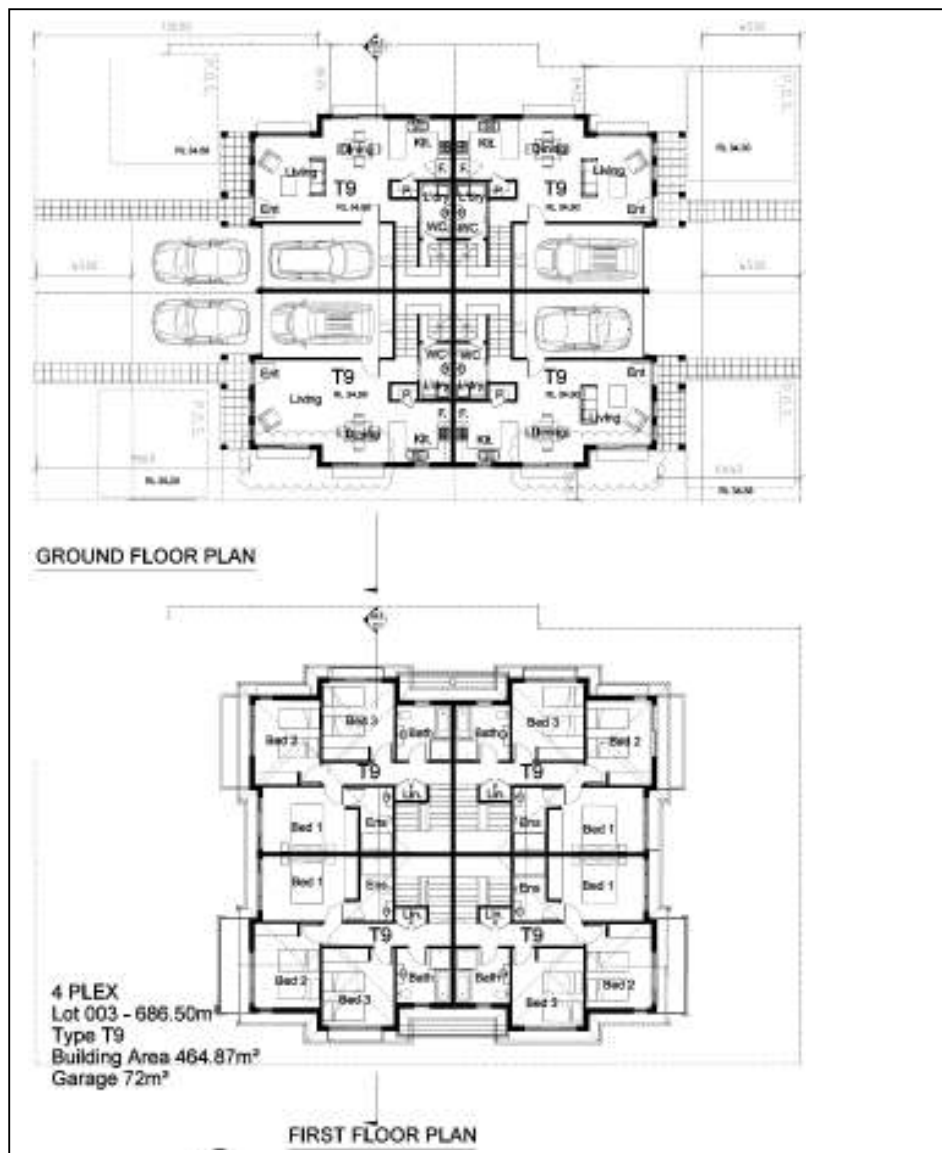
An extract of architectural plans for 2, 3 and 4 Plex houses in Stage 1 are included in the following figures. The final figure shows the provision of public open space associated with Stage 1. This includes the provision of recreation facilities, stormwater and Water Sensitive Urban Design Measures

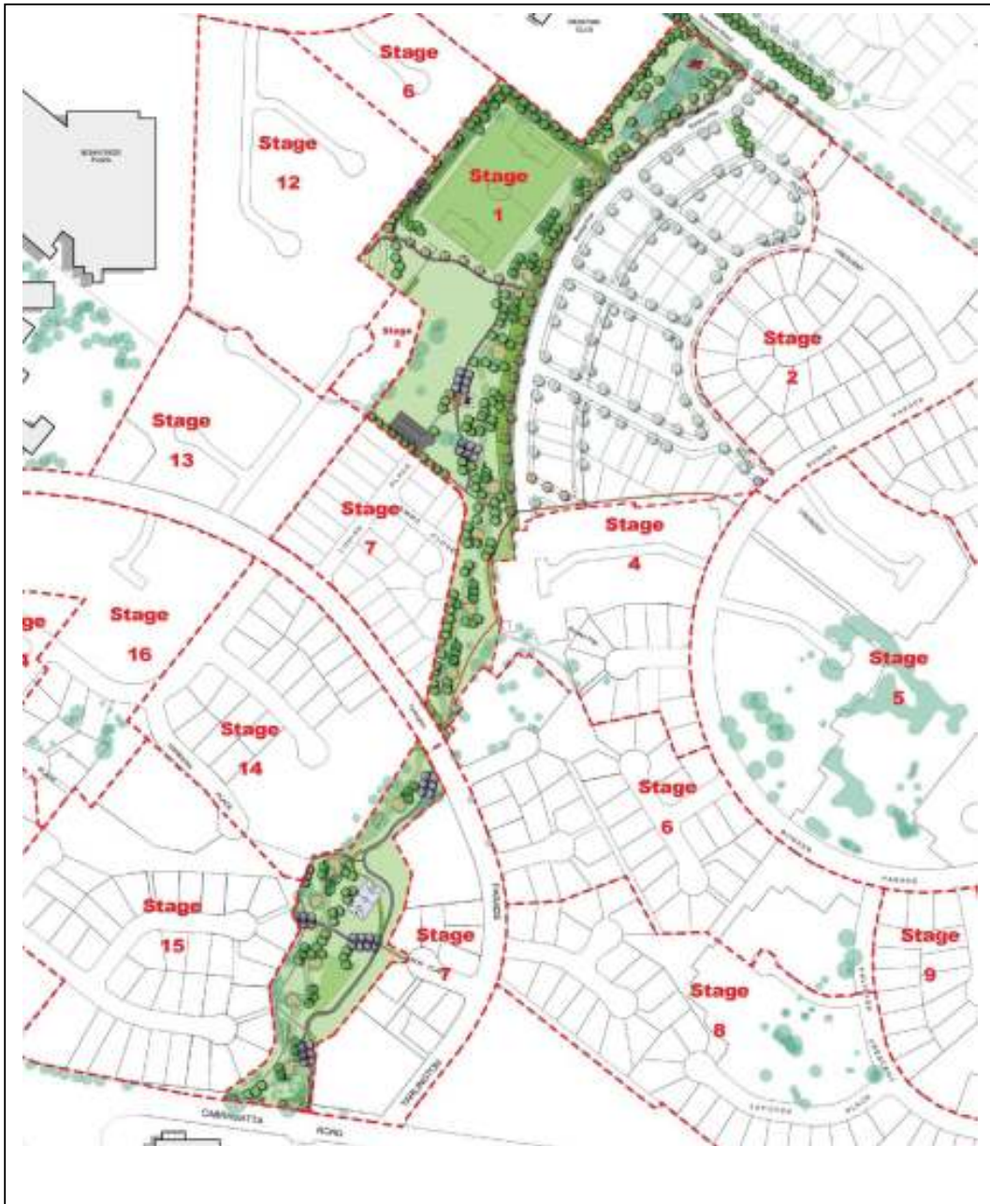
Mix	Dwelling Type	Lots (comprising Torrens, Community, Strata Title)	Dwellings (No.)	Private (No. and % of total dwelling type)	Public (No. and % of total dwelling type)
0%	Retirement	0	0	0 (0%)	0 (0%)
0%	Lifted Apartments	0	0	0 (0%)	0 (0%)
0%	8 Attached Dwellings	0	0	0 (0%)	0 (0%)
0%	6 Attached Dwellings	0	0	0 (0%)	0 (0%)
45%	4 Attached Dwellings	48	48	32 (30%)	16 (15%)
23%	3 Attached Dwellings	24	24	15 (14%)	9 (8%)
19%	2 Attached Dwellings	20	20	14 (13%)	6 (6%)
13%	Houses	14	14	10 (10%)	4 (4%)
0%	Existing Private	0	0	0 (0%)	0 (0%)
0%	Retained Public Villas	0	0	0 (0%)	0 (0%)
100%	<b>Total</b>	<b>106</b>	<b>106</b>	<b>71 (67%)</b>	<b>35 (33%)</b>











*New public open pace system associated with Stage 1*

### 3.2 PROJECT CHRONOLOGY

- 21 December 2005 – request for opinion lodged with the Department as to whether Part 3A applies (Clause 6)
- 30 June 2006 – The Minister for Planning formed the opinion that the proposal is a Project and that Part 3A of the Act applies.
- 11 April 2007 – Instrument of Delegation to Fairfield City Council to carry out the functions of the Director General conferred by Part 3A of the Environmental Planning and Assessment Act, 1979.
- 30 April 2007 – Preliminary Assessment lodged with Council (and the Department of Planning) in accordance with Section 75F of the Act requesting the Director-General's Environmental Assessment Requirements (DGR's) be issued by Council.
- 29 May 2007 – Director- General's Environmental Assessment Requirements (DGRs) were issued by Council on behalf of the Director General outlining the matters to be addressed in the Environmental Assessment.
- 25 October 2007 - Environmental Assessment lodged with Council for a test of adequacy in accordance with the provisions of Section 75H of the Act.
- 8 November 2007 – An application seeking approval for a Concept Plan Approval for the renewal of the estate and a Stage 1 Project Application was lodged with Council.
- 14 November 2007 - Correspondence was forwarded to the proponent directing that a range of issues are to be addressed within 21 days of the date of the letter.
- 27 November 2007 – Additional information was lodged with Council addressing issues raised in Council correspondence dated 14 November 2007 regarding test of adequacy. Assessment deemed adequate.
- 19 December 2007 to 15 February 2008 – Environment Assessment placed on public exhibition.
- 8 February 2008 – Preliminary advice forwarded to the proponent regarding issues raised in the assessment of the application by Council.
- 22 February 2008 – Summary of submissions provided to proponent.
- 27 February 2008 – Presentation to Council's Independent Hearing and Assessment Panel (IHAP) for the purposes of providing background to the project and outlining the details associated with the concept plan and stage 1 project application.
- February to May 2008 – a series of meetings were held with Council staff to discuss issues arising from the public notification and associated submissions. This also included separate meetings with various members of Council in relation to the preparation of the VPA and expected timeframes for infrastructure delivery.
- 24 April 2008 – Correspondence issued by Council providing specific comments regarding the assessment of the concept plan and stage 1 project application, some of which had been previously provided in Council's correspondence dated 8 February 2008.
- 5 June 2008 – Preferred project report submitted
- 26 June 2008 – Presentation to Council's IHAP to discuss amendments to the concept plan and stage 1 project application in response to issues previously raised by IHAP, submissions received during the public exhibition process and issues raised by Council's assessing officers.
- 25 August 2008 – Meeting with the proponents Planning Consultants to discuss masterplan document and stage 1 project application plans.
- 19 September 2008 – Final Masterplan document and stage 1 architectural plans submitted that addressed some minor inconsistencies.

### 3.3 PROJECT AMENDMENTS

A Preferred Project Report was submitted on 5 June 2008 incorporating the following amendments:

#### 3.3.1 Concept plan

- Part 5 (private realm) of the **Masterplan** document has been revised in relation to the following;
  - Lot size – slight reduction in lot sizes for the detached (-13.75m<sup>2</sup>), 3-plex (-60m<sup>2</sup>) and 4-plex (-30m<sup>2</sup>) arranged dwellings.
  - Site Coverage – building envelope reduced from 75% to 65% including garages and car spaces. Landscaped area has remained the same (35%) however the deep soil zone has increased from 25% to 30%.
  - Solar access – has been modified so that all adjoining living area windows and 50% of private open space on the subject site and adjoining site receives at least 3 hours of direct sunlight between 9am and 3pm on the 21<sup>st</sup> June.
  - Building height – reference to height of 9m has been deleted however the proposed 2-storey building height has been retained with some 3 storey elements added.
  - Fencing – has been revised and a fencing strategy has been prepared by EDAW and referenced in the masterplan document.
  - Storage – Reference to 50% of storage space being located within the building has been deleted. This means storage can be internal or external.
  - Apartment and seniors living – reference has been included that these forms of housing will be assessed in accordance with the provisions of SEPP 65 and the accompanying Residential Flat Code and Seniors Living SEPP.
- Part 4 (public realm) of the **Masterplan** document has also been reviewed and amended which has resulted in simplifying controls for ease of interpretation, correcting anomalies, clarifying wording of certain controls to provide more certainty and consistency in the delivery of intended urban design outcomes and provide major improvements to the quality of the streetscape.
- The concept plan maps have been updated to include revised terminology and a minor amendment to the location of stage 14.
- The **Community Renewal Services Plan** has been updated to exclude financial information and provide details relating to employment targets, a mitigation strategy for younger children, and an impact assessment for the indigenous community of Bonnyrigg.
- A **Community Renewal Services Implementation Plan** has been prepared to provide the overall approach and framework to community renewal and outlines a range of community development initiatives which are directed towards enhancing social inclusion, strengthening community life and supporting well being of residents.
- The **Water Cycle Management Report** has been updated to provide details on the proposed water recycling option and address details relating to stormwater and drainage and flooding.
- The **Transport Management Accessibility Plan** has been updated to address details relating to carparking, mode shift, traffic impacts, internal road network, public transport and bus services and pedestrian and bicycle accessibility.
- A **Project Design Report** has been prepared to outline the processes and outcomes of the design work for the public open space and streetscapes within the Bonnyrigg Masterplan and addresses the comments made by Council with regard to open space.
- The **Masterplan Infrastructure Report** has been updated to address details relating to earthworks, access places, stormwater and recycled water.
- The **Masterplan Environment & Construction Management Plan** has been updated to address provisions relating to water quality management.
- The **Economic Impact Assessment** has been updated to clarify the wording relating to potential opportunities for retail space within the estate and recognises the potential impact arising from the proposed expansion of the Bonnyrigg Plaza.
- The key changes to the **Voluntary Planning Agreement** include:

- Refinement of the items and information provided in the VPA.
- Preparation of an Infrastructure Delivery Plan as a key part of the VPA which provides clarity on the way infrastructure will be provided on the site.

A Land Management Report has been prepared by Vince Morgan Surveyors which will be included in the VPA. The report outlines the process to undertake road closures and subsequent dedication of land to Council and demonstrates that the land suitable for its intended purpose being public roads and open space.

### 3.3.2 Stage 1 Project Application

- Each of the amendments to the Masterplan, including both the public realm and private realm guidelines, have been reflected in amendments to the architectural, landscape and infrastructure plans and reports submitted with the Stage 1 Project Applications. Specific changes to the architectural plans submitted with the Stage 1 Project Application in November 2007 include:
  - Revisions have been made to create greater variety in the streetscape:
  - Contemporary design provided to Lots 6, 19 and 43.
  - Skillion roof provided to Lots 8, 15, 26 and 31.
  - Three storey element provided to Lot 12.
- Revisions have been made to improve solar shading and reduce opportunities for overlooking:
  - All windows which have the ability to overlook private open space have been provided with privacy screens.
  - All windows which are not adequately shaded have been provided with additional awnings, or shading screens.
- Revisions have been made to provide increased storage:
  - All dwelling layouts have been revised to incorporate larger internal storage.
  - Storage in garages has now been included on the floor plans.
  - Lot 7 and Lot 41 (both Dwelling Type T19) have outdoor sheds.
- Revisions have been made to optimise solar penetration into the dwellings. This involves a significant number of proposed dwellings being amended to achieve this outcome.
- The **subdivision plan** has been updated to reflect the revised housing layouts.
- The **landscape plans** have been updated to reflect the revised housing layout and the amended provisions of the Masterplan, including the revised fencing strategy.
- The **infrastructure plans** have been updated to reflect the revised housing layout and the comments made by Council during the assessment of the application.
- Stage 1 BASIX Certificates and NatHERS Assessment have been prepared for the Stage 1 dwellings.

The amended concept Plan and associated documents and Stage 1 Project Application was not re-advertised however was placed on Council and Department of Planning's web site from the 18 June 2008 onwards.

## 4 STATUTORY CONTEXT

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### 4.1 MAJOR PROJECT DECLARATION

The project is a Major Project under *State Environmental Planning Policy (Major Projects) 2005* being described in Schedule 1, Clause 13 being development within Group 5 Development for the purposes of Residential, Commercial or Retail Projects with a capital investment of more than \$50 million. The opinion was formed by the Minister for Planning on 30 June, 2006.

## 4.2 PERMISSIBILITY

Under Fairfield Local Environmental Plan (LEP) 1994, sections of the site are currently zoned part 2(a) Residential A, part 5(a) Special uses and part 6(a) Existing and Proposed Recreation. These zones permit a range of uses associated with the proposal, including dwelling houses and community facilities on land zoned Residential A. In addition, under Clause 25H of Fairfield LEP 1994 residential flat buildings, mixed use development (comprising business premises, community facilities, dwellings, entertainment facilities, refreshment rooms and shops) and multi-unit housing are permitted over some sections of the site. As such, the proposed development is not strictly permissible under the provisions of the LEP. The objectives and provisions of the LEP are discussed further in Section 4.8 of this report. Notwithstanding, the provisions of those plans are set aside by Section 75R of the Environmental Planning and Assessment Act, 1979 as a declared major project that achieves the objects of the Act as discussed in Section 4.5.

## 4.3 MINISTER'S POWER TO APPROVE

The Council as the delegate of the Director General has exhibited the Environmental Assessment (EA) in accordance with section 75H (3) of the Environmental Planning and Assessment Act, 1979, as described in section 5, below. Notwithstanding that elements of the project are not permissible under the relevant environmental planning instrument, the project meets the requirements of the Major Projects SEPP. Therefore, the Council as the delegate of the Director General has met its legal obligations and the Minister has the power to determine this project.

## 4.4 DIRECTOR-GENERAL'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (DGRS)

The DGRs issued on 29 May 2007 required the following issues to be addressed:

- Heads of Consideration
- Relevant EPIs and Guidelines to be addressed
- Proposal Description
- Urban Form and Design
- Social and Health Impact
- Safety/Public Domain/Pedestrians
- Transport, Traffic and Access
- Planning Agreements and/or Developer Contributions
- Ecologically Sustainable Development
- Contamination and Geotechnical Issues
- Environmental Management
- Drainage and Stormwater Management
- Utilities Infrastructure
- Heritage and Cultural Significance
- Statement of Commitments

The DGRs are contained in **Appendix A**

The EA lodged by the proponent on 8 November 2007 and additional information submitted on 27 November 2007 was adequate in addressing the DGRs.

## 4.5 OBJECTS OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The objects of any statute provide an overarching framework that informs the purpose and intent of the legislation and gives guidance to its operation. The Minister's consideration and determination of a project application under Part 3A must be informed by the relevant provisions of the Act, consistent with the backdrops of the objects of the Act.

The objects of the Act in section 5 are as follows:

- (a) to encourage:
  - (i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,
  - (ii) the promotion and co-ordination of the orderly and economic use and development of land,
  - (iii) the protection, provision and co-ordination of communication and utility services,
  - (iv) the provision of land for public purposes,
  - (v) the provision and co-ordination of community services and facilities, and
  - (vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and
  - (vii) ecologically sustainable development, and
  - (viii) the provision and maintenance of affordable housing, and
- (b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and
- (c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.

Of particular relevance to the assessment of the subject application is consideration of the Objects under section 5(a) and 5(b). Relevantly, the Objects stipulated under section 5 (i), (v) and (viii) are significant factors informing the determination of the application. The project does not raise significant issues with regards to (iii), (iv), (vi), and (vii).

With respect to ESD, the Act adopts the definition in the *Protection of the Environment Administration Act 1991* including the precautionary principle, the principle of inter-generational equity, the principle of conservation of biological diversity and ecological integrity, and the principle of improved valuation, pricing and incentive mechanisms. The Department has considered the Objects of the Act, including the encouragement of ESD in the assessment of the project application.

#### **4.5.1 Ecologically Sustainable Development (ESD) Principles**

**There are five accepted ESD principles:**

- (a) decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations (the integration principle);
- (b) if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation (the precautionary principle);
- (c) the principle of inter-generational equity - that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations (the inter-generational principle);
- (d) the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making (the biodiversity principle); and
- (e) improved valuation, pricing and incentive mechanisms should be promoted (the valuation principle).

#### **4.5.2 Consistency with ESD Principles**

The Council has considered the proposed development in relation to the ESD principles and has made the following conclusions:

Integration Principle - the social and economic benefits of the proposal are demonstrated in the documentation submitted for the assessment of this application. The environmental impacts are and will be addressed through the proponent's EA report including the Statement of Commitments, and recommended conditions of consent. The Council's assessment has duly considered all issues raised by the community and public authorities. The



proposal as recommended for approval does not hinder the opportunities of others to continue to use and enjoy the site.

**Precautionary Principle** – the EA is supported by technical and environmental reports which conclude that the proposal's impacts can be successfully mitigated. No irreversible or serious environmental impacts have been identified. The recommended conditions require additional information to ensure the proposal's extent and nature is fully documented particularly with respect to storm water management, water sensitive urban design measures proposed, BASIX and proposed ESD stretch targets, and opportunities are provided for proposed mitigation and management measures to incorporate best practices.

**Inter-Generational Principle** – the site's redevelopment for residential use, including the provision of open space areas, roads, and infrastructure works, along with all future staged applications is considered to meet this principle. Through implementation of the Environment and Construction Management Plan, Water Cycle Management Plan, ESD – Environmental Opportunities Report and all other environmental and management practices proposed to be employed on the site will be enhanced or introduced to ensure the environment is protected for future generations.

**Biodiversity Principle** – The site contains remnant pockets of indigenous vegetation as part of the Preliminary Environmental Assessment under Part 3A of the Act. A detailed flora and fauna and 8 part test of significance was undertaken pursuant to the NSW Threatened Species Conservation Act 1995 and the Commonwealth Environmental Protection Biodiversity and Conservation Act 1999. This revealed that there were no original endangered or threatened ecological communities within the site. The Department of Environment and Climate Change subsequently concurred with this conclusion. Notwithstanding, the preferred project proposes to provide a 30% tree canopy cover, and a condition requires at least 20% locally native species further satisfying the biodiversity principle.

**Valuation Principle** – the proposal seeks to promote new residential development in an existing urban area by maximising reliance on existing infrastructure, and enabling residents to live near work, leisure and other opportunities. This means that the proposal will provide relatively affordable residential properties in an existing urban area. An affordable housing strategy has also been prepared to assist potential home buyers who wish to enter the housing market. The infrastructure will be paid for and built by the developer.

The proponent is committed to ESD principles and has reinforced this through the Statement of Commitments and the Environmental Assessment which explores key ESD opportunities, including mechanical, electrical and hydraulic systems as well as architectural designs to ensure high environmental performance is delivered.

#### 4.6 SECTION 75I OF THE ACT

Section 75I(2) of the Act provides that the Director-General's report to the Minister is to address a number of requirements. These matters and the Department's response are set out as follows:

<b>Section 75I(2) criteria</b>	<b>Response</b>
Copy of the proponent's environmental assessment and any preferred project report; and	The Proponent's EA and the proponents Preferred Project Report is provided with the Statement of Commitments at Appendix E.
Any advice provided by public authorities on the project; and	All advice provided by public authorities on the project for the Minister's consideration is set out in Section 6 of the report.
Copy of any report of a panel constituted under Section 75G in respect of the project; and	No statutory independent hearing and assessment panel was undertaken in respect of this project.
Copy of or reference to the provisions of any State Environmental Planning Policy that substantially govern the carrying out of the project; and	Each relevant SEPP that substantially govern the carrying out of the project is identified in Section 4.8 of this report (summary in Appendix B), including a brief assessment of the impact of the SEPP on the development proposal.

Section 75(2) criteria	Response
Except in the case of a critical infrastructure project – a copy of or reference to the provisions of any environmental planning instrument that would (but for this Part) substantially govern the carrying out of the project and that have been taken into consideration in the environmental assessment of the project under this Division, and	An assessment of the development relative to the prevailing environmental planning instrument is provided in Sections 4 and 5 of this report. A summary is provided in Appendix B and C.
Any environmental assessment undertaken by the Director General or other matter the Director General considers appropriate; and	The environmental assessment of the project application is this report in its entirety.
A statement relating to compliance with the environmental assessment requirements under this Division with respect to the project.	The proponent's EA addressed the DGR requirements (Appendix A) and the EA is considered to have satisfied those requirements as addressed in this report. Refer to the Conclusion in Section 7 of this report for a statement relating to this requirement.

## 4.7 ENVIRONMENTAL PLANNING INSTRUMENTS (EPIs)

### 4.7.1 Application of EPIs to Part 3A projects

To satisfy the requirements of section 75(2)(d) and (e) of the Act, this report includes references to the provisions of the environmental planning instruments that govern the carrying out of the project and have been taken into consideration in the environmental assessment of the project. A summary of compliance with the relevant EPIs is in **Appendix B**.

The primary controls guiding the assessment of the proposal are:

- State Environmental Planning Policy No. 11 – Traffic Generating Developments
- State Environmental Planning Policy No. 55 – Remediation of Land
- State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development
- State Environmental Planning Policy (Seniors Living) 2004
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
- Draft State Environmental Planning Policy No. 66 – Integration of Land use and Transport
- Fairfield Local Environmental Plan 1994

Other controls to be considered in the assessment of the proposal are:

- Bonnyrigg Town Centre Development Control Plan No. 28
- Fairfield City Wide Development Control Plan 2006
- Fairfield City Residential Development Strategy 2003
- Sydney Metropolitan Strategy and Draft West Central Sub Regional Strategy

The provisions, including development standards of local environmental plans, and development control plans are not required to be strictly applied in the assessment and determination of major projects under Part 3A of the Act. Notwithstanding, these standards and provisions are relevant considerations as the DGRs require the proponent to address such standards and provisions. Accordingly the objectives of a number of EPIs and the development standards therein and other plans and policies that substantially govern the carrying out of the project are appropriate for consideration in this assessment as follows:

### 4.7.2 State Environmental Planning Policy (Major Projects) 2005

The Major Project SEPP applies to the project as discussed in section 4.1 above.

#### **4.7.3 State Environmental Planning Policy No.11 – Traffic Generating Developments**

Under the provisions of the above SEPP, the Concept Plan component would trigger consideration under Schedule 1 part (g) 'subdivision of land into 200 or more allotments where the subdivision includes the opening of a public road'. The stage 1 project application would trigger consideration under Schedule 2 part (g) 'subdivision of land into 50 or more allotments'.

The Concept Plan and stage 1 Project Application was referred to the Sydney Regional Development Advisory Committee of the Roads and Traffic Authority. The committee considered the proposal at its meeting of 2 July 2008 and provided comments to Council by letter dated 15 July 2008. The consideration of SRDAC is discussed in Section 6 of this report.

It is noted that SEPP No. 11 – Traffic Generating Development has since been repealed and replaced with SEPP (Infrastructure) 2007. Clause 11(1)(b) of the Savings Provision stipulates that this policy does not apply to a Part 3A project if it has not yet been determined before the commencement of this policy. SEPP (Infrastructure) 2007 was gazetted on 21 December 2007 and commenced 1 January 2008. The Concept Plan and Stage 1 project application was submitted on the 8 November 2007. Accordingly, SEPP (infrastructure) 2007 does not apply.

#### **4.7.4 State Environmental Planning Policy No. 55 – Remediation of Land**

An environmental site investigation of the estate has been undertaken. The report indicates that whilst no significant potential for contamination resulting from present or past uses has been found, it has been determined that due to fill being observed on site with no chemical analysis being undertaken and limited minimal sampling and analysis being conducted throughout the site, the above conclusions may be premature and further testing should be conducted focusing on the areas of environmental concern. On this basis, the precautionary principle is applied and further investigation is required prior to the construction of each stage of development.

#### **4.7.5 State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Buildings**

Residential Flat Buildings are defined in SEPP 65 as buildings with 3 or more storeys and 4 or more self contained dwellings. The Concept Plan proposes residential flat buildings within the western portion of the site. Given that the Concept Plan does not provide specific design details of each building at this stage, the provisions of the SEPP will be considered at the time when residential flat buildings are proposed. The proposed staging plan indicates that residential flat buildings will be constructed at stage 6, 12, 14 and 16. Accordingly, the Masterplan document requires that these buildings be assessed against these provisions.

The buildings proposed in the Stage 1 Project Application are less than 3 storeys and as such, the provisions of SEPP No. 65 do not apply.

#### **4.7.6 State Environmental Planning Policy (Seniors Living) 2004**

It is proposed to construct seniors living accommodation as part of the Concept Plan application within the estate. It is proposed that seniors living accommodation will be constructed at stage 12. Accordingly the Masterplan document requires that these buildings be assessed against these provisions at the time when these buildings are proposed to be constructed.

#### **4.7.7 State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004**

BASIX aims to encourage sustainable residential development by requiring a list of commitments by the proponent, as to the manner in which the development will be carried out at the development consent stage. With respect to the Concept Plan application, the Masterplan document requires that all BASIX requirements are met throughout all stages of the development.

In relation to the Stage 1 Project Application, BASIX certificates have been submitted which demonstrate compliance with the relevant provisions. However, it is proposed to provide a reticulated recycled water supply system throughout the estate instead of installing water tanks for each individual dwelling. The BASIX Sustainability Index does not presently recognise this alternative water recycling arrangement. On this basis, the proponent has agreed to enter into a Deed of Agreement with the Department of Planning to confirm its commitment to the installation of alternative recycled water infrastructure and to enable the details to be included in the BASIX tool.

The Deed of Agreement is in the process of being finalised between the proponent and the Department of Planning. The Deed also states that should the reticulated recycled water system not be achieved, then all dwellings shall comply with the BASIX requirements and all dwellings retro-fitted to meet this requirement. It is not known at this stage, when the supply of recycled water will be made available due to other regulatory processes outside the scope of this proposal.

However, it is proposed to construct recycled water infrastructure with each stage and this infrastructure will be connected to the potable water supply temporarily until the recycled water supply becomes available. The BASIX certificates cannot be re-issued until such time as the BASIX tool has been updated to include this component. It is anticipated that this will take upwards of 8 weeks. On this basis, it is considered reasonable that a condition be imposed that requires BASIX certificates being re-issued for the Stage 1 Project Application, prior to the issue of the Construction Certificate.

#### **4.7.8 Draft State Environmental Planning Policy No.66 – Integration of Land Use and Transport**

The key aims of Draft SEPP 66 are:

- (a) *improving accessibility to housing, employment and services by walking, cycling, and public transport,*
- (b) *improving the choice of transport and reducing dependence solely on cars for travel purposes,*
- (c) *moderating growth in the demand for travel and the distances travelled, especially by car,*
- (d) *supporting the efficient and viable operation of public transport services,*
- (e) *providing for the efficient movement of freight.*

The Concept Plan for the proposal includes a range of initiatives which support the above objectives, summarised below;

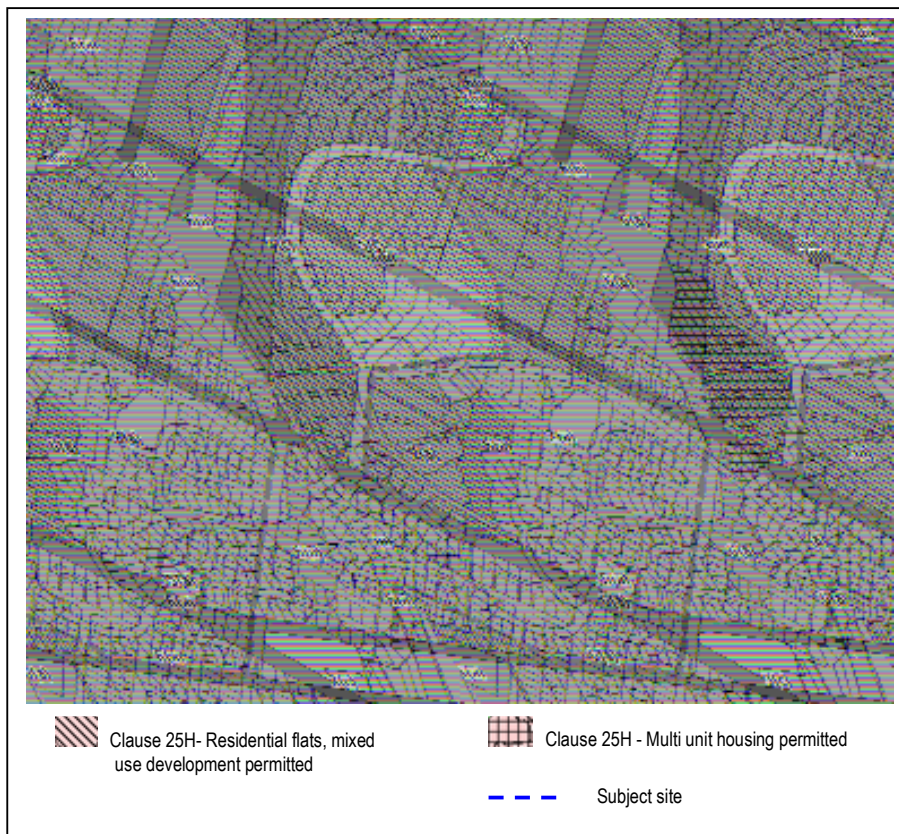
- The Estate currently contains a number of cul-de-sacs and the existing road network does not support cross connections between the eastern and western sections of the Estate, as such restricting access from the residential lands to available services and facilities and generating increased vehicle journeys. This situation will be remedied by the new road network associated with the proposal, which will result in a more permeable network, promoting more direct access to existing and proposed services, facilities and public transport (see **s.5.17** for further details) within Bonnyrigg, including the Liverpool to Parramatta Bus Transitway
- The new road network and open space areas also incorporate a new system of footpaths/cycleway connections, creating greater opportunities for walking and cycling to various destinations within the site (e.g. community precinct, active and passive recreation areas) and in nearby areas.
- The TMAP prepared for the proposal (see **s.5.17**) aims to increase a modal shift to public transport in future stages of the development. Measures to support this outcome include allowance for a bus route through the heart of the site and a statement of commitment (see **Appendix E**) to the provision of bus shelters.
- The proposed development envisages an approximate doubling in the total residential population of the site. The demand generated by this outcome will help maintain the viability of retail activities and services in the area including public transport.

#### 4.7.9 Fairfield Local Environmental Plan 1994

Sections of the site are currently zoned part 2(a) Residential A, part 5(a) Special Uses and part 6(a) Existing and Proposed Public Recreation under the provisions of Fairfield Local Environmental Plan 1994 (FLEP 1994).

The above zones permit a range of uses associated with the proposal, including dwelling houses and community facilities on land zoned Residential A.

In addition, under Clause 25H of Fairfield LEP94 residential flat buildings, mixed used development (comprising business premises, community facilities, dwellings, entertainment facilities, refreshment rooms and shops) and multi unit housing (town houses and villas) are permitted over sections of the site as shown in the following diagram.



*Extract from Fairfield LEP 1994*

The BLC Project proposes to extend the scope of multi unit housing more broadly over the estate, including into sections of land currently zoned for open space purposes as a result of reconfiguration of residential allotments, parks and reserves.

Although there are pockets of multi unit housing located on 'super lots' generally across the entire estate, rezoning of the whole of the estate for this form of housing is required to ensure certainty and permissibility for this use under future stages of the project.

In regard to this issue, it is noted that the proponents have requested that the Minister utilise the powers available under Part 3A cl.75R, to authorise the range of uses proposed under the development. This issue is discussed in further detail under **section 4.3** of this report.

In addition to the above, Clause 25 (H) of Fairfield LEP94 also contains a number of objectives aimed at supporting the Masterplan provisions of Part 3 of Bonnyrigg Town Centre DCP 28 (see below) which aims to

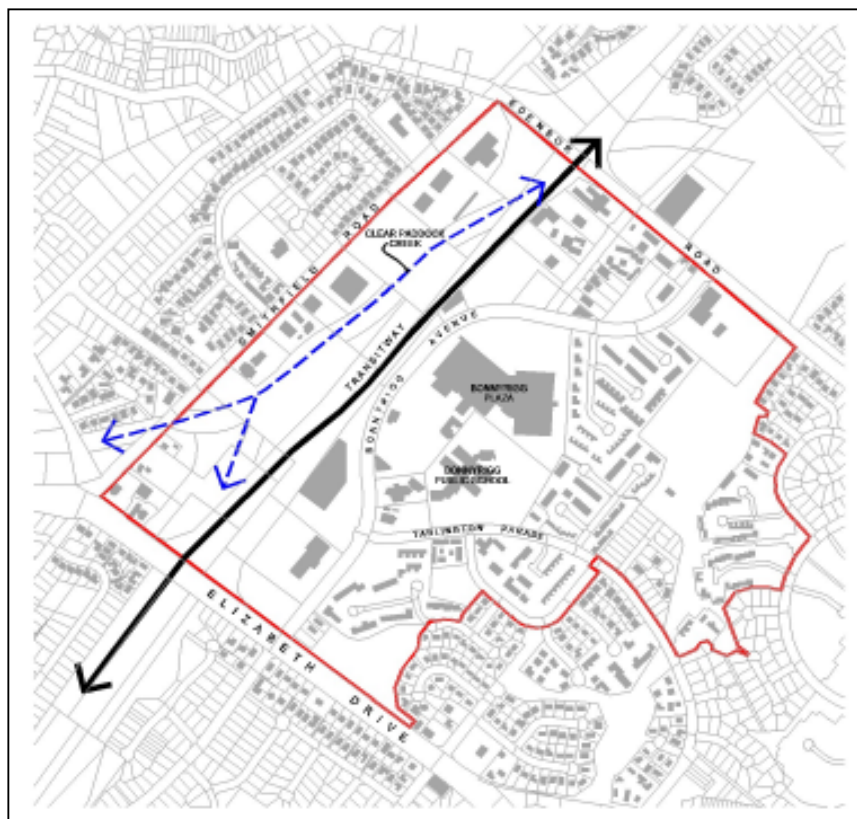
support redevelopment and renewal of the Bonnyrigg Town Centre, including part of the DoH lands zoned for residential flat buildings, multi unit housing and mixed use developments shown in the above diagram.

It is noted that Fairfield City Council is currently in the process of preparing a new Comprehensive LEP for the City (due in late 2009) which will replace the current Fairfield LEP 94 and would have regard to the Ministers final decision in relation to additional uses that are permitted under Pt 3A of the EP&A Act.

## 4.8 OTHER PLANS AND POLICIES

### 4.8.1 Bonnyrigg Town Centre DCP 28 and Fairfield City Wide DCP 2006

The Bonnyrigg Town Centre DCP 28 currently applies to part of the BLC development site as shown in the following extract from the DCP;



DCP 28 sets out both broader strategic planning/masterplan objectives and detailed development controls for the private and public domains of the Bonnyrigg Town Centre.

At the time of implementation of the Town Centre DCP, discussions were still taking place between Fairfield City Council and Dept of Housing in regard to redevelopment of the Bonnyrigg Housing Estate. It was acknowledged by Council that more detailed master planning and community consultation exercises would be required to establish redevelopment principles for the whole of the Estate.

As a result, a series of acknowledgments are included in DCP 28 that the strategies and controls prepared for the Estate are essentially an interim measure and at some stage would be superseded by a new masterplan (as proposed under the BLC Project).

This masterplan would also provide a basis for the development and implementation of new development controls for both Bonnyrigg Town Centre and DOH Estate. Preparation of the BLC Concept and Stage 1

Project Application plans have been the subject of extensive technical analysis, investigations and consultation with the community, Council and various State Agencies having regard to the Director General's Assessment Requirements issued for the proposal.

This process has included consideration of current strategies and provisions of DCP 28 a number of which have been integrated with the proposed Concept Plan for the Estate. Based on this premise, it is considered reasonable to accept that the principles and strategies associated with the BLC Project will form the basis for the development of new planning strategies and provisions for the Bonnyrigg Estate.

The Fairfield City Wide (CW) DCP 2006 complements the provisions of Bonnyrigg DCP 28 by introducing development controls that are not included in the Town Centre DCP. The CW DCP is also the principle development control document for that part of the Estate not covered by the Town Centre DCP.

Further analysis of the relationship of the proposal with specific provisions of the City Wide DCP (particularly car parking) is covered in other sections of this report.

In addition, as referred to previously in this report the provisions of Part3A of the EP&A Act enable the Minister to approve a concept plan or project application that do not comply with the provisions of a development control plan.

#### **4.8.2 Fairfield City Residential Development Strategy 2003**

The current Fairfield Residential Strategy (Chp 10) highlights the need for further review of residential lands as a result of emerging local plans such as the Bonnyrigg Town Centre DCP and LEP.

In addition, chapter 9 of the Residential Strategy (Chp 9) a number of key housing issues that are considered relevant to the context of the BLC Project including;

- Each residential area should ideally contain a mix of house types, styles and layouts to enable many different family groups including the single and elderly to find suitable accommodation.
- A greater choice offered in the stock of housing throughout the LGA to allow people to seek housing that is appropriate to their lifecycle.
- The need to achieve greater densities overall balanced with existing residents and developer preferences to maintain the status quo.
- Balance between accessibility to facilities, economic use of land, public transport operation, construction costs, privacy, provision of public and private open space, market demands and landscape capacity.

The Strategy also identifies a number of key local directions and themes that need to be factored into opportunities for urban consolidation and are evident in the BLC Project including;

- Fairfield City will increasingly become a 'City of Centres' to provide opportunities for diversity and enterprise. The challenge is in developing unique centres that compliment each other, providing services and facilities that suit local priorities as well as developing specialist roles within the broader City context.
- Provide higher density housing within and adjacent to the commercial core of centres.
- Where public transport is available and relevant, higher density development can be encouraged without significant adverse effects of increases in motor vehicle use.
- Construction of the Liverpool to Parramatta Transitway presents an opportunity to consider increased densities within walking distance of new bus stations.

Various sections of this report highlight (e.g. **s.4.84 & s.5.17**) a range of aspects of the proposal which support the above themes and directions of the Fairfield Residential Strategy.

It is noted that Fairfield City Council is currently in the process of reviewing its Residential Strategy 2003 (due for finalisation in late 2008/early 2009) as part of preparation of a new Comprehensive LEP for the City. This review would have regard to the implications and impact of the BLC Project on housing issues in the City.



### 4.8.3 Fairfield City Plan 2007

The Fairfield City Plan provides an overarching visioning and management framework, informing more detailed planning and management strategies for Fairfield City, including expenditure measures under its Management Plan.

This relationship is based on seven broad aims as follows;

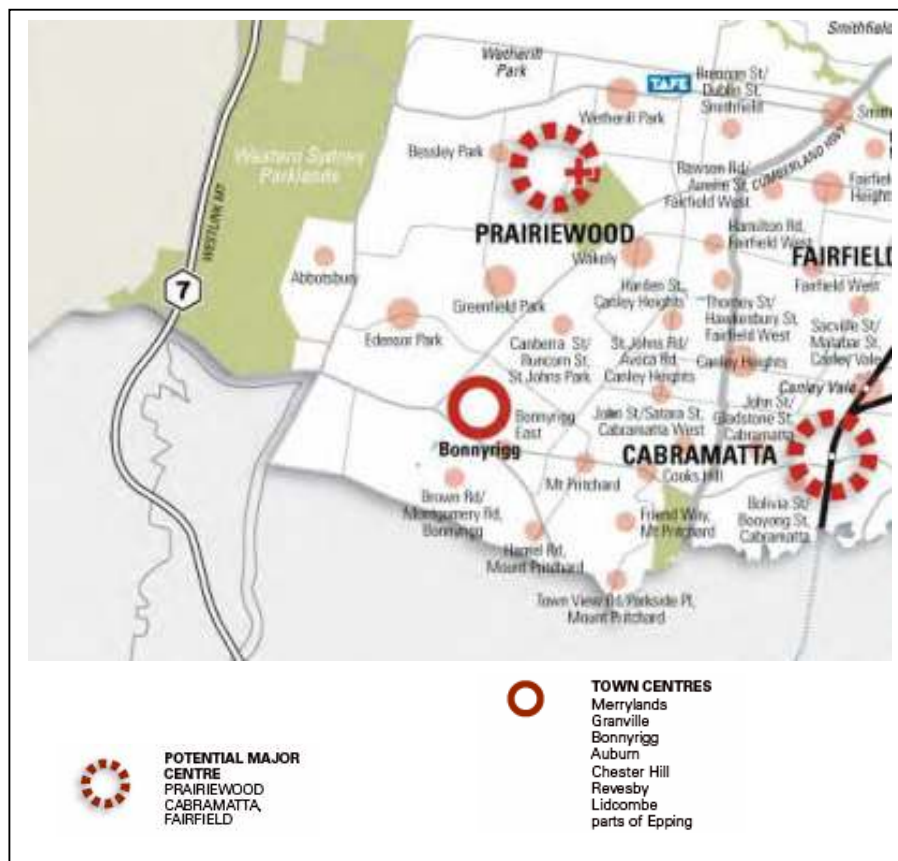
- Broad Aim 1: The Right Things in the Right Place
- Broad Aim 2: A Healthy, Skilled and Resourceful Population
- Broad Aim 3: Clean and Safe, Natural and Built Environments
- Broad Aim 4: Biodiversity and Ecological Health
- Broad Aim 5: A Well Based Local Economy
- Broad Aim 6: Cultural Harmony
- Broad Aim 7: Governance and Organisational Capability

It is noted that the submission lodged by Fairfield City Council to the BLC Project outlines a range of issues that are linked to the above aims. The proponents response and further assessment of these issues is provided for under **Section 6** of this report.

### 4.8.4 Sydney Metropolitan Strategy and draft West Central Sub Regional Strategy

The Sydney Metropolitan Strategy *City of Cities – A plan for Sydney's Future* (2005) and in particular the associated West Central draft Subregional Strategy (2008) establish the NSW State Government's broader planning framework for linking local and state planning directions in the Sydney Metropolitan Area.

Under the West Central draft Sub Regional Strategy, Bonnyrigg is nominated as a Town Centre as indicated in the following figure.





A comparison of Bonnyrigg Town Centre with the general attributes associated with Town Centres (identified under table 8 of in the draft Sub Regional Strategy) is included in the following table:

West Central draft Subregional Strategy (Centres and Corridors)	Status/comparison
Centre Type - Town Centre	<ul style="list-style-type: none"> <li>- Bonnyrigg is one of Fairfield City's four main town centres</li> <li>- The other three main centres (Cabramatta, Fairfield and Prairiewood) are all identified as Potential Major Centres under the Metro and Sub Regional Strategy's</li> </ul>
Radii – 800m (Summary) <ul style="list-style-type: none"> <li>- Town Centres have one or two supermarkets, community facilities, medical schools etc.</li> <li>- Contain between 4,500 and 9,500 dwelling. Usually a residential origin than employment destination.</li> </ul>	<ul style="list-style-type: none"> <li>- The area within the 800m radii is shown in the figure following this table (over page) and includes the majority of the Bonnyrigg Housing Estate</li> <li>- The town centre area currently incorporates; two supermarkets, a discount department store and a range of specialty shops and primary school (currently no medical centre)</li> <li>- Fairfield City Council has established a community centre, library and youth centre within the town centre</li> <li>- Information in relation to residential densities is included following this table.</li> </ul>

The surrounding residential area within 800m of Bonnyrigg Town Centre, currently comprises approximately 1800 dwellings, which currently represents a low density level in comparison to the projected density for town centres under the subregional strategy.

Apart from pockets of existing medium density housing (contained within super lots) within the DOH Estate, the majority of residential land within 800 m of the Town Centre outside the Estate comprises single (one and two storeys) residential dwelling stock, typically 450-500m<sup>2</sup> in allotment size. All of this residential land is zoned lower density Residential 2(a) under Fairfield LEP apart from sections of the Town Centre around Bonnyrigg Plaza where medium density residential development is permitted (see s.4.7.9 above).



Under the BLC Project, approximately 1400 additional dwellings would be created within the Estate over the next 10-15 years, representing an important cornerstone and impetus for Bonnyrigg evolving further as a Town Centre, as identified under the Sub Regional Strategy. This direction supports the principles of sustainable integrated land use development and urban consolidation by making best use of available public transport, infrastructure and services.

The draft Sub Regional Strategy contains a number of actions that are relevant to the scope of the BLC Project. This includes the following specific action:

*C4.2 – Redevelop and Regenerate Department of Housing Stock,*

It is noted that the Sub-Regional strategy includes specific reference to the BLC project as a successful example of work relating to renewal of Department of Housing Stock in “transforming an 800 house estate into a vibrant and diverse Town Centre”. The various sections of this report provide more detail on the nature of issues relating to this renewal process.

In addition to the above, the BLC proposal is generally consistent with a range of other actions identified under the West Central Sub Regional Strategy. The following table provides an overview of the relationship of the proposal with Key Actions identified in the Strategy.

West Central Sub Regional Strategy Key Actions	Context within the BLC Project
Allow for housing growth close to public transport corridors	<ul style="list-style-type: none"> <li>- Higher density precincts (incorporating future residential flat buildings) within the site are within 400m of the Parramatta to Liverpool Bus Transitway. This includes areas identified for future seniors housing</li> <li>- Reconfiguration of the internal road network provides for provision of a bus services directly through the site. This is an important component of the proposed TMAP (see <b>s.5.18</b>) which aims to enhance the use of public transport under future stages of the development.</li> <li>- The eastern boundary of the site is a maximum of 1km from the Bonnyrigg T-Way station. Currently direct access from the Estate to this destination is either restricted or obstructed by the current fragmented road layout, lack of pedestrian/cycleway linkages, subdivision layout and existing buildings.</li> <li>- The proposal aims to address these constraints by creating a more permeable road network, enhancing pedestrian and cycleway linkages (incorporating way finding indicators and new lighting) throughout the site, resulting in significant access improvements from residential areas within to Bonnyrigg Town Centre and the Bus Transitway.</li> </ul>
Provide greater housing choice and affordability	<ul style="list-style-type: none"> <li>- The proposal includes a broad cross section of housing types and styles, including single dwellings, 2, 3, 4 &amp; 6 'plex' dwellings, apartment and seniors housing (see <b>s.5.1</b>)</li> <li>- 30% of new residential development on the site will be for social housing purposes. Although there will be a reduction in the provision of social housing on the site, this will be compensated for by providing new social housing off site.</li> </ul>
Improve recreational facilities and access to open space	<ul style="list-style-type: none"> <li>- The development involves significant reconfiguration of existing open space areas within the Estate, without any significant change in the net amount of land zoned for open space purposes (see <b>s.5.20</b>).</li> <li>- Under the proposal the quality of the new open space areas will be significantly improved as a result of the new passive and active recreational areas and facilities.</li> <li>- This includes enhanced distribution and variety in open space areas across the site with capacity to cater for a broader cross section of community needs, including passive and active space for youth, children, adults and seniors.</li> <li>- Significant improvements will be provided between the relationship of open space and residential areas as result of eventual conversion of the current Radburn housing layout to an enhanced interface between residential buildings and open areas, removal of narrow open space laneways, introduction of active street edges and improved opportunities of surveillance from residential areas to open space.</li> </ul>

#### 4.8.5 Related development applications and consents

- On 17 December 2007, Fairfield City Council issued Development Consent No. 874/2007 for the erection of two (2) x two-storey multi-unit residential buildings for temporary use as a community facility and a display/exhibition unit at 29 Wilton Way, Bonnyrigg (on land identified as part of Stage 18 of the Concept Plan).
- On 8 August 2008, Fairfield City Council issued Development Consent No. 103/2008 for the erection of construction fencing and signage, upgrading of existing boundary fencing, construction of footpath works and establishment of associated landscaping at Tarlington Reserve, Deakin Place, Badgery Way and Wall Place, Bonnyrigg (on land identified as part of Stage 1 of the Concept Plan).

- On 13 February 2008, Modification Application No. 26/2008 was lodged proposing amendments to Development Consent No. 874/2007. The proposed amendments include alterations to the internal layout of the community facility and a display/exhibition unit, erection of four (4) free-standing garages and the provision of vehicle access from Tarlington Parade. This application is presently under assessment.
- On 8 September 2008, Development Application No. 1542.1/2008 was lodged proposing the demolition of 60 dwellings at Deakin Place, Badgery Way and Wall Place, Bonnyrigg (on land identified as part of Stage 1 of the Concept Plan). This application is presently under assessment.

The proposed development has been assessed against these controls in **Appendix C** to this report.

## 5 ASSESSMENT OF ENVIRONMENTAL IMPACTS

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Key issues considered in the Council's assessment of the Environmental Assessment include:

- Urban design and dwelling design issues within Stage 1 Project Application
- Social impacts and community renewal programs
- Open Space and Recreation opportunities
- Transport, accessibility, traffic and parking matters
- ESD and environmental issues
- Infrastructure matters

Other impacts that have been considered are:

- Safety and security (CEPTED) ; and
- Health Impacts

### 5.1 SUBDIVISION LAYOUT

#### 5.1.1 Concept Plan

The concept plan application does not propose subdivision or indicate how the site will be subdivided, rather, concentrates on housing distribution, densities, and urban design guidelines to define the proposed character of the BLC Project. Accordingly, subdivision will be considered at the time of assessment for each stage of development. The Stage 1 project application proposes to subdivide the land to create 106 lots. The subdivision component is discussed in further detail below (s.5.1.2)

#### 5.1.2 Stage 1 Project Application

Stage 1 comprises the creation of 106 new lots, comprising a mix of torrens title, strata title and community title lots, depending on the dwelling type to be constructed. The proposed road layout includes the retention and surface upgrade of Reeves Court with connections provided to new streets for improved accessibility across the site. Additionally, the proposed road layout will include a new entry into the site off Edensor Road. This entry will be facilitated by the proposed extension and realignment of Bunker Parade.

It is important to note that Clause 22A of the Fairfield Local Environmental Plan 1994 requires a minimum area of 450m<sup>2</sup> for residential allotments in the Residential 2(a) zone. However, all of the residential lots within the proposed subdivision of Stage 1 are less than 450m<sup>2</sup>.

However, under Part 3A of the EP&A Act enables the Minister to amend the LEP to authorise the carrying out of development within a zone where that development is prohibited, where it is the subject of an approved Concept Plan.

In this regard, the Minister can make an Order under Part 3A of the EP&A Act to allow the subdivision of residential allotments with an area of less than 450m<sup>2</sup> within the 2(a) Residential zone.

Approximately 15 out of the 106 lots have a minor flood risk and, as such will need to address relevant performance measures to minimise the impacts of flooding.

The proposed subdivision does not meet the minimum requirements of Chapter 14 of the Fairfield City-Wide DCP 2006 – Subdivision, specifically with regard to minimum lot widths and area, access way widths, road and footpath widths and splay corners. However, given that the proposed subdivision is part of the Concept Plan, it is envisaged that it will comply with the controls contained within the amended Development Control Plan for Bonnyrigg.

Proposed Stage 1 subdivision is satisfactory subject to conditions of consent.

## 5.2 STAGE 1 PROJECT APPLICATION – ASSESSMENT

The Stage 1 Project Application comprises two components. The first component is the subdivision of the land into 106 residential allotments and the creation of the road layout, and the second component consists of the construction of 106 dwellings.

Bonnyrigg Partnerships have requested that these two components be treated separately. In this regard, two separate approvals would be issued, together with separate conditions of consent. However, for the purposes of this report, the subdivision and construction components are assessed concurrently.

It is pertinent to note that, the provisions of Part 3A of the Environmental Planning and Assessment Act 1979, set aside Fairfield Local Environment Plan 1994 and the Fairfield City-Wide DCP 2006 pursuant to Section 75R of the Act.

Notwithstanding the above, a table illustrating compliance with Council's controls is held at Appendix C of this report. In summary, the Stage 1 Project Application is consistent with the aims and objectives of the Fairfield City-Wide DCP 2006 and the majority of dwellings within Stage 1 comply with the DCP controls.

Below is a detailed assessment of the Stage 1 Project Application. This assessment takes into account the aims, objectives and development controls provided within the Bonnyrigg Masterplan document as part of the relevant matters for consideration outlined within the Director-General's Requirements.

### 5.2.1 Stage 1 - Compliance with Proposed Bonnyrigg Masterplan

Numerical compliance with the Bonnyrigg Masterplan is outlined in the following table.

Criteria	Relevant Development Standard (Bonnyrigg Masterplan)	Proposed	Compliance
Floor Space Ratio (FSR)	No FSR proposed	N/A	N/A
Lot Size	<b>Detached dwelling:</b> Width: 9.5m (12.5m if twin garage) Depth: 27.5m <b>2 attached dwellings:</b> Width: 15m (if car spaces located at rear) 17m if car spaces located at street front) Depth: 30m <b>3 &amp; 4 attached dwellings:</b> Width: 20m Depth: 30m <b>6 attached dwellings:</b> Width: 22m Depth: 30m <b>8 attached dwellings:</b> Width: 28m Depth: 30m	The majority of allotments comply with the minimum lot size requirements. The lots that do not are only slightly under the minimum and are considered acceptable.  N/A  N/A	Yes  N/A  N/A
Site Coverage	<b>Building Footprint:</b> Max 65% of any allotment can be built upon, including garages and car spaces <b>Landscaped Area:</b> Min. 35% of each allotment to be landscaped (includes hard and soft landscaping) Min. 30% of landscaped area must be deep soil	None of the 44 allotments exceed the maximum 65%  All 44 allotments achieve the minimum landscaped area and deep soil zones	Yes  Yes

Criteria	Relevant Development Standard (Bonnyrigg Masterplan)	Proposed	Compliance
Streetscape	<p><b>Garages:</b> All garages must be set back 5.5m from street frontage</p> <p>Max. combined width of garages fronting street not to exceed 50% of allotment width</p> <p>Max. combined width of garages fronting access places not to exceed 80% of allotment width</p> <p>No triple or more garages side-by-side fronting streets</p> <p><b>Building Elements:</b> All dwellings to have direct entry from street with visible front doors</p> <p>Dwellings on corner are to be designed so that one elevation addressed the street. Secondary elevation is to be visually interesting. Long blank walls are to be avoided</p>	<p>Lots 8 &amp; 9 have 3 garages and 2 carports on the boundary of Reeves Crescent</p> <p>All allotments comply</p> <p>All allotments comply</p> <p>Lots 8 &amp; 9 have 3 garages side-by-side fronting Reeves Crescent All dwellings comply</p> <p>All dwellings comply</p> <p>The western elevation for Lot 30 is considered to be poor for a corner site. It is not adequately articulated or finished.  Amended elevation plan will be required</p>	<p>No</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes- with the exception of the proposed dwelling on lot 30</p>
Bulk and Scale	<p><b>Building Height:</b> Max. 2 storeys for detached and attached dwellings, with some 3 storey elements for 'hero' sites</p> <p><b>Ceiling Height:</b> Minimum 2.4m floor to ceiling heights</p>	<p>All dwellings comply</p> <p>All dwellings comply</p>	<p>Yes</p> <p>Yes</p>
Setbacks	<p><b>Front:</b> A min. 80% of the width of the front elevation of the building (excl. garages and balconies) is to be setback a minimum of 4.5m from the front boundary A max. 20% of the width of the front elevation of the building may be setback a min. of 1.2m from the front boundary.</p> <p><b>Side:</b> 80% of the dwelling length shall be setback a minimum 900mm</p> <p>A zero setback may be provided on access places</p>	<p>Lots 8, 13 &amp; 35 do not comply</p> <p>All dwellings comply</p>	<p>No</p> <p>Yes</p>
Privacy	<p>Dwellings must be designed to prevent overlooking into the living areas and private open spaces of adjoining dwellings</p> <p>If this cannot be achieved, measures to ensure privacy shall be provided</p>	<p>All dwellings have been designed to maintain privacy.</p> <p>Where privacy is difficult to achieve through the layout of the dwelling, privacy screens have been provided</p>	<p>Yes</p>

Criteria	Relevant Development Standard (Bonnyrigg Masterplan)	Proposed	Compliance
Safety and Security	Dwellings to be designed to accord with CPTED principles.	The four (4) CPTED principles are reflected within the architectural plans. The Stage 1 dwellings are considered to be satisfactory from safer-by-design perspective	Yes
Private Open Space (POS)	All ground level dwellings should achieve 25m <sup>2</sup> of POS All first floor dwellings should achieve 10m <sup>2</sup> of POS.	All dwellings comply	Yes
Car Parking and Garages	<b>Detached dwellings:</b> 2 spaces <b>Attached dwellings:</b> 1 or 2 b/r – 1 space 3 b/r – 1.5 spaces Visitor parking	<b>Detached dwellings (14)</b> 28 spaces <b>Attached dwellings</b> 2 bedroom (18) 18 spaces 3+ bedrooms (74) 111 spaces Total Required - <b>157</b> Total provided - <b>192</b>	Yes
Storage	1 b/r dwelling – 6m <sup>3</sup> 2 b/r dwelling – 8m <sup>3</sup> 3 b/r dwelling – 10m <sup>3</sup>	All dwellings comply	Yes
Solar Access	Detached and attached dwellings must be designed to ensure the adjoining living area windows and more than 50% of their private open space on the subject site or any adjoining site receives at least 3 hours of direct sunlight between 9am and 3pm on the 21st of June.	89 out of 106 dwellings in Stage 1 comply. This equates to 84% compliance.  However, of the remaining 17 dwellings, most can meet part of the solar access controls. (i.e. good solar access to living areas, but not to the private open space area, or vice versa).	Yes the majority of dwellings comply

The issues of non-compliance as noted in the above table are as follows:

1. Setbacks

Lots 8, 13 & 35 do not provide the required setbacks from the front property boundary.

Lots 8 & 9 have 3 garages and 2 carports on the boundary of Reeves Crescent. The Masterplan requires a setback of 5.5 metres

2. Streetscape

Lots 8 & 9 have 3 garages side-by-side fronting Reeves Crescent

The western elevation for Lot 30 is considered to be poor for a corner site and is not adequately articulated.

3. Solar Access

89 out of 106 dwellings in Stage 1 comply. This equates to 89% compliance.

The above non-compliances are discussed in greater detail in the assessment section below.



### 5.3 FUTURE CHARACTER AND VISUAL IMPACTS

The character of the development has, for the most part, been driven by strong community feedback, backed up by market research which has expressed a desire for dwellings with a suburban character. Accordingly, the built form proposed represents traditional brick veneer construction with pitched tile roof. To achieve the required density however, the suburban bungalow has metamorphosed into what is termed the 'Plex', which accommodates 2, 3, 4, 6 and 8 dwellings within a large two-storey building. It is noted that Stage 1 does not contain any 6 or 8 Plex designs.

The character of Stage 1 will be similar to that of surrounding neighbourhoods, while the dwellings themselves will be somewhat larger than detached dwellings in neighbouring developments.

Buildings will generally be closer to the front boundary, than is seen in neighbouring areas, given the front setback has been reduced to 4.5 metres. However, it is noted that Chapter 5 of the Council's single dwelling DCP has recently been amended to allow 4.5 metre setbacks.

Given that one objective of the redevelopment is to 'de-radburn' the existing public housing estate, the street pattern for Stage 1, as well as throughout the estate, has returned to a more regular grid pattern, while the cul-de-sacs that featured strongly have been removed. Dwellings are re-orientated so that passive surveillance of the street and public open spaces is maximised.

While Stage 1 comprises roughly 70% private and 30% public housing, the design philosophy is that visually there will be no discernable difference. Although building heights will be generally two-storey, three-storey elements will be introduced to a small number of dwellings in prominent locations (hero sites). However, there is one 3-storey dwelling in Stage 1.

The predominant character of the current estate is small, single-storey dwellings on relatively large blocks set within leafy, somewhat native, landscape. This character should be maintained, albeit with a larger two-storey housing form.

### 5.4 DENSITY, HEIGHTS AND SETBACKS

#### 5.4.1 Concept Plan

Densities proposed to be achieved throughout the site as indicated in the Masterplan aims to meet the following objectives;

- Increasing residential access to transport, services, and parks. This includes locating apartment sites and providing more attached homes close to Bonnyrigg Town Centre and the T-way, lining park edges with attached homes, and planning for all housing to be within 400m of a park;
- Providing for a complete and diverse community through a mix of housing types appropriate for diverse households. New housing types to be introduced include lifted apartments of 4- to 6-storeys, new detached houses, and homes that are attached in groupings of 2-,3-,4-,6-. And 8-attached arrangements. New housing provides a range of bedroom combinations and varying levels of outdoor space and maintenance requirements;
- Increasing density while maintaining the suburban feel and character of the area. This includes designing attached homes to look and feel like large 2-storey houses;
- Reducing the stigma of social housing. This includes making social housing indistinguishable from private housing from the street, and providing social housing throughout the neighbourhood; and
- Providing quality apartment dwellings as an area appropriate housing option, including as a solution for aging in place. This includes designing apartment buildings to be accessible and to relate to the leafy suburban character of the area via ground level courtyards and landscaped spaces between buildings.

The overall density proposed equates to approximately 29.4 dwellings per hectare. The site presently maintains 11.6 dwellings per hectare. Densities are dispersed throughout the site with the attached dwellings and

apartment precincts located to the eastern portion of the site adjoining the Bonnyrigg Town Centre and Bus Transitway. The detached dwellings are located to the western portion of the site (see s. 3.1)

Under the Draft West Central Sub Regional Strategy, Bonnyrigg is nominated as a Town Centre. This strategy identifies a number of key strategies and actions including a radii of 800m containing between 4,500 and 9,500 dwellings. The majority of the Bonnyrigg estate is within the 800m radii (see s. 4.8.4). The surrounding residential area within 800m of the Bonnyrigg Town Centre currently comprises approximately 1800 dwellings and represents a low density in comparison to the projected density for town centres under the subregional strategy. The densities proposed within the redevelopment would therefore meet the aims and objectives of the Draft West Central Sub Regional Strategy.

#### 5.4.2 Stage 1 Project Application

##### *Density*

The density for Stage 1 is 44 dwellings per hectare. This figure is based on the net area for Stage 1, which is 2.4ha (total area of Stage 1 minus open space and roads). This figure is slightly lower than the average density proposed across the whole estate, which is 48.4 dwellings per hectare. It is important to note that these figures exclude all parks and all roads and, as such, are not true reflections of actual density across the estate. Actual density for the entire estate is 29.4 dwellings per hectare. This figure includes all parks and all roads.

To achieve the required dwelling yield, the two-storey suburban bungalow form has been expanded to include 2, 3 and 4 dwellings within the one building. It was initially conveyed to Bonnyrigg Partnerships that achieving the required increase in density through one building form across the estate was not an ideal outcome, and that traditional housing types (i.e. single, two and three-storey dwellings in a variety of housing types such as single, studio, duplex, multi-unit, row/terrace housing, villa/townhouse, three & four-storey walk-ups) would achieve the required density with a more desirable urban outcome.

However, the proponent indicated that the bulk of the increase in density would occur through the apartment buildings located in close proximity to the Town Centre. In addition, the proponent contended that the large suburban bungalow type house product was the result of feedback from current residents of the Estate and extensive market research, which indicated that both present and potential future occupants preferred the traditional suburban housing form over other dwelling types.

Notwithstanding the above, it is considered that the density proposed for Stage 1 is satisfactory.

##### *Setbacks*

The side and rear setbacks within Stage 1 are considered to be satisfactory. Adequate separation is provided between dwellings to maintain adequate privacy and provide adequate landscaping. The front setback control allows dwellings to be built 4.5 metres from the front boundary. This is considered acceptable from a streetscape perspective. The proposed dwelling facades are considered to be adequately varied so that the overall streetscape is acceptable from a visual perspective even though the dwellings are only 4.5 metres of the front boundary. As such, a front setback of 4.5 metres is considered acceptable.

It is noted that the front setback control contained, within the Bonnyrigg Masterplan also allows 20% of the width of the building's front elevation to be located 1.2m from the front boundary. This control provides for adequate façade articulation by allowing balconies, porticoes and the like to protrude a maximum of 3.3 metres of the main building line. While 1.2 metres is a considerable encroachment upon the 4.5 setback, it is only for 20% of the width of the building's frontage and allows flexibility in building façade..

It is also noted that the proposed nature strip for the local road network (excluding the rear access places) is 3.5 metres with a 1.2 metre wide footpath. As such, the dwellings will be setback a considerable distance from the street and should not impact adversely upon the streetscape.

However, from a compliance point of view, proposed Lots 8, 13 & 35 do not provide the required 4.5 metre setback from the front property boundary. In addition, proposed Lots 8 & 9 show three (3) garages and two (2) carports located directly on the boundary of Reeves Crescent. The Masterplan requires a setback of 5.5 metres and does not allow three (3) garages side-by-side. As such, it is recommended that the minimum setbacks be provided to these Lots.

#### *Height*

Stage 1 comprises a mixture of detached and attached dwellings with a predominant height of two storeys. However, there is one 'hero' (prominent) dwelling with a minor three-storey building element. There are no residential flat buildings proposed for Stage 1. The proposed height for the dwellings within Stage 1 is considered satisfactory.

#### *Height*

Stage 1 comprises a mixture of detached and attached dwellings with a predominant height of two storeys. However, there is one 'hero' (prominent) dwelling with a minor three-storey building element. There are no residential flat buildings proposed for Stage 1. The proposed height for the dwellings within Stage 1 is considered satisfactory.

## **5.5 DESIGN ISSUES**

### **5.5.1 Stage 1 Project Application**

#### *Built Form*

The initial proposal was considered to lack diversity in architectural form and variety in housing type. The quality of the dwelling product was also considered to be substandard.

In response, the elevations of the dwellings were refined to provide greater architectural articulation and variety between dwellings. While the housing type essentially remains the same (i.e. large two-storey suburban dwellings), the amended architectural plans display a greater level of creativity and interest through architectural treatments to each façade.

The entry thresholds have been strengthened; skillion roofs have been included amongst the proposed traditional pitched roofs; privacy screens and shading devices have been incorporated; metal roofs have been provided in addition to the traditional tiled roof; the architectural quality of facades addressing the street have been strengthened to provide visual interest and create a quality streetscape.

Overall, it is considered that the quality of the built form has improved considerably under the Preferred Project and is acceptable.

#### *Private Open Space*

The Bonnyrigg Masterplan requires that a minimum of 25m<sup>2</sup> of private open space be provided for dwellings at ground floor level and a minimum of 10m<sup>2</sup> for dwellings at first floor level. This amount of private open space is considered to be too small and should be increased to provide for an adequate level of amenity for future residents.

The proponent has indicated that most of the ground floor and first floor dwellings within Stage 1 achieve well in excess of 25m<sup>2</sup> and 10m<sup>2</sup> respectively. This is acknowledged and it is noted that only a few dwellings within Stage 1 achieve only the minimum requirements, with most far exceeding the minimum amount.

However, as indicated above, there is concern that when density increases for subsequent stages, the provision of private open space will only achieve the above the minimum, which is not considered adequate.

It is noted that State Environmental Planning Policy (SEPP) 65 – Design Guidelines for Residential Flat Development requires the provision of only 10m<sup>2</sup> for apartments. In this regard, 10m<sup>2</sup> for first floor dwellings is considered appropriate, however, it is still considered that 25m<sup>2</sup> for all ground level dwellings is inadequate.

Whilst the 25m<sup>2</sup> minimum is unacceptable, in order to allow flexibility in the design of the dwellings and their associated private open space, a higher standard which allows averaging the private open space whilst setting a minimum of 25m<sup>2</sup> is considered appropriate and a reasonable approach.

In this regard, it is recommended that for 1 and 2 bedroom dwellings a minimum of 25m<sup>2</sup> of private open space be applied, for 3 and 3+ bedrooms a minimum of 60m<sup>2</sup> be applied with an average of 50m<sup>2</sup> being provided across all stages of development being constructed for ground floor private open space only.

#### *Internal/External Storage*

Initially, the Stage 1 dwellings were provided with inadequate internal and external storage. The amended design now provides for at least 10m<sup>3</sup> of combined internal and external storage areas. This is considered acceptable.

#### *Internal Living/Bedroom Spaces*

The Bonnyrigg Masterplan does not provide minimum sizes for living rooms, dining areas and bedrooms, however, this is considered necessary to provide for satisfactory level of internal amenity for future residents. This issue was flagged with the proponent during the assessment of the EAR and, for the most part, the internal living, dining and bedroom areas have been increased. As such, it is considered that the internal spaces for Stage 1 are satisfactory.

#### *Fencing*

The fencing strategy provided within the initial Masterplan was considered to be difficult to understand and did not correspond with the submitted architectural plans. In addition, the types of fencing initially proposed did not maintain privacy between rear private open space areas, and the types fencing incorporated in the front yards inhibited passive surveillance and created areas that appeared not to belong to anyone, thus creating problems of security and maintenance.

The amended fencing strategy incorporates a suite of fencing types that appropriately respond to the situation to which they are employed. For instance, low masonry walls with either landscape or wrought-iron infill are used to allow passive surveillance to front yards, but still identify and delineate ownership. Also incorporated are 1.5 and 1.8 metre high open-type timber fences are used to delineate ownership between dwellings whilst still providing a certain level of passive surveillance where required.

## **5.6 VIEWS**

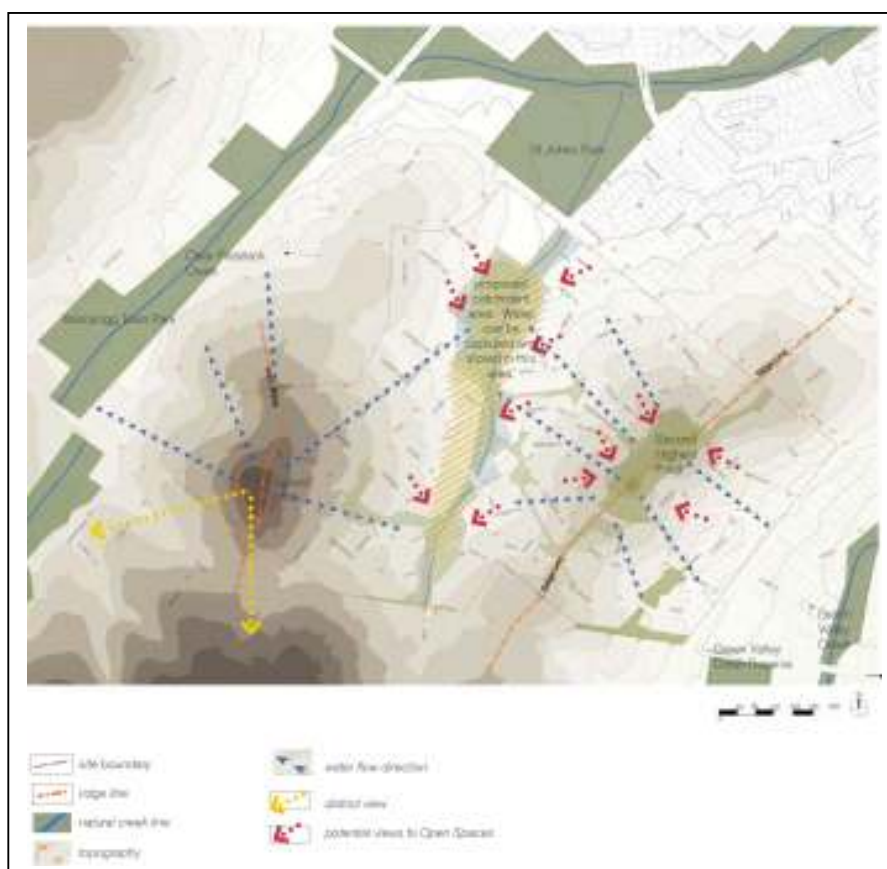
Generally speaking the development site comprises a relatively low lying and the gently undulating terrain, restricting the potential for significant district views from the majority of existing residential development within the site.

Both external and internal views from residential development within the Estate are further constrained by the nature of Radburn design principles and layout of the existing Estate, which features town houses and villas

with their principle outlooks and access orientated toward internal streets, high fencing at the rear of properties and views to open space from roads through the Estate being largely obstructed by houses.

The only critical vista within the Estate identified during preparation of the Concept Plan relates to local views of the Khmer Temple on Bonnyrigg Ave, which is also a heritage item under Fairfield LEP. In response to this issue, appropriate urban design measures have been incorporated into development of the Concept Plan and are discussed in detail under s.5.23 (non aboriginal heritage)

Preparation of the Concept Plan for the proposal also included a contextual analysis exercise (below), which identified opportunities for both enhanced external (district) and internal views (e.g. into open space) under urban design solutions followed in the Concept Plan. It is noted that key outcomes under this process is a more direct and integrated relationship between new residential and open space areas in the Concept Plan (e.g. houses with more direct outlooks into the open space) and generally stronger visual profile for open space along many of the new roads in the Estate, promoting the overall level of visual amenity created under the project.



Contextual & view analysis

## 5.7 PRIVACY

### 5.7.1 Stage 1 Project Application

Initially, there were many instances within the Stage 1 design where privacy was compromised. In most cases, the windows of habitable rooms were located where they could directly overlook the habitable rooms or private open space areas of adjoining dwellings.

The amended design submitted under the Preferred Project has negated all instances of overlooking, by either redesigning dwellings so that the windows of habitable rooms cannot overlook adjoining windows or private open space areas, or, where this was impossible to achieve, privacy screens have been provided.

A satisfactory level of privacy is now achieved for all Stage 1 dwellings.

## **5.8 SOLAR ACCESS AND OVERSHADOWING**

### **5.8.1 Stage 1 Project Application**

The initial design did not respond well to the prevailing environmental conditions of the site. Adequate solar access and cross-ventilation were not achieved for all dwellings, in particular the proposed 3plex and 4plex designs. Shading devices were minimal and in most cases ineffective.

In response, the designers re-arranged the dwellings to take advantage of sunlight and prevailing breezes. 3plex and 4plex housing types were relocated and reorientated so that living areas and private open space area received solar access. Shading devices, such as balconies and overhangs, have also been incorporated into the design to provide for an adequate level of shading. It is noted however, that some 3plex and 4plex designs still do not receive optimal solar access, given their orientation and the constraints posed by that dwelling type.

The proponent has argued that, due to the constraints of the site (for example the existing street pattern), and the need to achieve density targets required under the development, it is not possible to achieve 100% compliance with solar access provisions.

However, from a numerical point of view, it is noted that the Stage 1 dwellings achieve 89% compliance with the solar access control. It is also important to note that where full compliance is not achieved, the dwellings have been provided with larger living and open space areas so that amenity to those dwellings have been maximised. With regard to passive solar design, it is considered that the Stage 1 dwellings display an adequate level of compliance with solar access provisions.

In addition, it is considered that the solar access control contained within the Masterplan is satisfactory.

## **5.9 DESIGN RECOMMENDATIONS**

The above assessment of the design of Stage 1 has found that, in general the Project Application is satisfactory and should be supported. However, it is recommended that the following amendments are incorporated into the design prior to the issue of a Construction Certificate. These recommendations can be conditioned accordingly.

1. That Lots 8, 13 & 35 are provided with the required 4.5 metre setback from the front property boundary.
2. That the garages and carports for Lots 8 & 9 provide a minimum setback of 5.5 metres as required by the Bonnyrigg Masterplan.
3. That the western elevation for Lot 30 is enhanced to adequately address the corner location.

In addition, after a review of the controls contained within Part 5 of the Bonnyrigg Masterplan – Private Realm Guidelines, it is considered that the private open space control on ground level be amended so that 1 and 2 bedroom dwellings have a minimum of 25m<sup>2</sup> of POS, 3 and 3+ bedroom dwellings have a minimum of 60m<sup>2</sup> of POS with an average of 50m<sup>2</sup> across all stages of development being provided.

## 5.10 SAFER BY DESIGN

The Radburn design is characterised by the separation of pedestrian and vehicular traffic by informal walkways connecting homes with open space. This method also turns houses around so that they front the informal pedestrian walkways and open spaces, while vehicular access is from the rear of the house, often via a cul-de-sac.

In most cases, the rear of the house becomes the formal entranceway, however, the streetscape is defined by 1.8 metre timber fences to maintain privacy to the rear of the dwelling.

The aim is to create a sense of community within a leafy, pedestrian-friendly neighbourhood. However, while this design has worked overseas, most notably in the town of Radburn in America, and in a number of instances in Australia, it hasn't been successful for public housing communities.

Areas in front and behind the dwelling suffer from a lack of ownership. As such, they are poorly maintained and are viewed as unsafe. The pedestrian walkways are poorly lit and have minimal surveillance and, as such, are under-utilised by most of the residents. Mobility is invariably dominated by the motor car.

The Bonnyrigg Living Communities Project aims principally to improve safety and security by removing the Radburn design, reorientating dwellings to face the street, creating a sense of ownership within the private domain and increasing activity and surveillance within the public domain so that people feel safe to use the public open space areas.

CEPTED principles are incorporated within the Masterplan which aims to focus housing design and the public domain on these principles. These are territorial reinforcement, passive surveillance, access control, and ownership and space management. These measures are considered appropriate and necessary to ensure the CPTED principles are implemented throughout the development of the site.

### *Stage 1 Dwellings*

The Crime Prevention Through Environmental Design (CPTED) report prepared by Urbis states that *"The design, integration and orientation of all dwelling types will be a significant improvement from the current situation and are assessed as adequate overall. Homes will have defined addresses which are visible from the street. Homes will all front streets, parks and public spaces and will strongly improve passive surveillance opportunities onto these areas."*

The four (4) principles of CPTED are *Natural Surveillance, Access Control, Territorial Reinforcement/Ownership and Space Management*.

Council's consultant indicates that the four (4) CPTED principles have been considered when designing the Stage 1 dwellings, particularly with regard to dwelling design, vehicle access and parking, lighting, fencing and private open space, and the principles are reflected in the Stage 1 architectural drawings. Council's consultant considers that the recommendations made with the proponents CPTED should be adopted.

From an assessment of the Applicant's CPTED Report, the report prepared by Council's CPTED consultant and the architectural plans, it is considered that the Stage 1 dwellings have been designed in accordance with CPTED principles. The materials used within the semi public/semi private front yards (i.e. fencing and landscaping) provide a sense ownership and also facilitate surveillance; living rooms and bedrooms are designed to overlook both public and private open space as well as the rear access lanes; appropriate security measures are provided to the rear garages and carports; the façade elements do not encourage unauthorised access; and paths, entries and garbage areas are to be lit to avoid concealment.

As such, it is considered that the Stage 1 dwellings have been designed in accordance with CPTED principles and are considered appropriate. It is recommended that the measures provided within the CPTED Report prepared by Urbis be implemented and appropriately certified.



### Stage 1 Public Open Space

The Social Impact Assessment (SIA) prepared by Judith Stubbs and Associates for the Project indicates that the current public open space system is generally regarded as unsafe with poor lighting, inadequate security, poor levels of maintenance and offer poor amenity. And, given the reduction in private open space proposed for each dwelling, the cultural transition required for existing residents to utilise public open space instead of private open space will require that parks are well maintained, and offer a high level of safety and security.

The Crime Prevention Through Environment Design (CPTED) report prepared by Urbis states that *"The open space layout will be transformed to a better used and safer environment providing connection across the area for pedestrians and cyclists. The master plan provides for nine new public open space areas designed for multiple and simultaneous uses. All areas of the new master plan area will have access to the upgraded public parks and houses adjacent to them will be given street addresses. Parks will be well lit with surveillance from passing street traffic as well as surrounding houses. This surveillance is facilitated by increased housing density and orientation towards the parkland."*

To ensure high levels of safety and security, both perceived and in real terms, the Bonnyrigg Masterplan prepared by Urbis focuses on improving safety through improved passive surveillance, lighting of main thoroughfares through open spaces, limiting car access to open space areas, provide pedestrian crossings around parks and restrict understorey planting in high recreation areas such as playgrounds, to maintain visibility.

Both the Masterplan and the CPTED Report provides comprehensive recommendations with regard to the lighting, landscaping and maintenance of public open space areas to ensure high levels of safety and security. Both CHD CPTED consultant and Council's Open Space Branch have assessed the Stage 1 public open space from a CPTED point of view and consider that these recommendations are adequate and appropriate.

However, Council's Open Space Branch also recommend that detailed design documentation for the Stage 1 parks be provided demonstrating that recommendations made within the Masterplan prepared by Urbis (page 104) and the CPTED Report prepared by Urbis (pages 29-32) are implemented.

### Stage 1 Street Network

As indicated above, the estate is characterised by the separation of pedestrian and vehicular traffic by informal walkways connecting homes with open space. Houses are turned around to face open space areas creating high fences at the rear and resulting in problems of ownership and passive surveillance within the street and laneway spaces.

Stage 1 provides a more regular street pattern and re-orientates dwellings so that each house has street frontage. Initially, concern was raised that the proposed rear access lanes, which provide for a road reserve of only 8 metres boundary to boundary, would be inadequate in terms of providing safety, security and visibility.

However, the CPTED Report indicates that the problems can be overcome through the use of surface treatments (e.g. raised paving) to discourage unauthorised access, garages and carports to be appropriately located to increase visibility and enhance surveillance, effective lighting that is not obscured by landscaping, and landscaping to be planted in such a way that maintains visibility and enables surveillance.

In this regard, the proposed street network is considered to be satisfactory from a CPTED perspective subject to the recommendations made within the Masterplan and the CPTED Report being implemented and certified.

Having regard to the above, it is considered that the Stage 1 dwellings, public open space and street network is acceptable from a CPTED perspective, subject to the implementation of the recommendations provided within the Masterplan and CPTED Report are properly implemented and certified.

## 5.11 SUSTAINABILITY

### 5.11.1 Building Sustainability Index - BASIX

In order to comply with the State Government's Building Sustainability Index tool known as 'BASIX', the dwellings within Stage 1 need to demonstrate a minimum 40% reduction in water and energy consumption. To this end, BASIX Certificates have been submitted for all 106 dwellings within Stage 1.

The 40% reduction in energy consumption is based on the incorporation of passive solar design initiatives and the installation of energy efficient appliances, such as gas instantaneous hot water systems.

The 40% reduction in water however, is based on the installation of 4000 Litre water tanks for each dwelling, or alternatively, the provision of a recycled water system. It is preferred by both Council and the proponent that the estate be provided with a recycled water system. Currently, the BASIX tool does not recognise a recycled water supply as a method to reduce water consumption. As such, the BASIX Certificates submitted to Council indicate the installation of individual water tanks.

The proponents have entered into a Deed of Agreement with the Department of Planning confirming their commitment to the provision of a recycled water supply. Based on the Deed of Agreement, the Department of Planning will amend the BASIX tool so that it recognises the recycled water system. The Deed of Agreement is in the process of being finalised.

It is not known at this stage however, when the recycled water supply can be physically delivered to the estate. As such, it is unlikely that the recycled water system will be delivered prior to the construction of the Stage 1 dwellings. The proponent has also committed to providing the appropriate infrastructure within Stage 1 (and subsequent stages if necessary) to facilitate the recycled water supply when it is available.

Given this commitment, it is considered appropriate that individual water tanks need not be provided at this stage. It is recommended however, that an appropriate condition be imposed that, once the Department of Planning has amended their BASIX tool, amended BASIX Certificates be submitted to Council reflecting the provision of a recycled water system.

It is also noted that the submitted BASIX Certificates, which show a reduction in energy use of 40%, are based on each dwelling incorporating double-brick construction. However, the proponent has indicated that double-brick construction will not be provided. Subsequently, it is recommended that amended BASIX Certificates be submitted to Council reflecting the correct method of building construction.

## 5.12 BASIX AND STRETCH TARGETS

While the BASIX requirement is for a 40% reduction in water and energy consumption, the Bonnyrigg Masterplan provides for 'Stretch Targets' which aim to achieve a 60% reduction in per capita water use and a 50% reduction in per capita CO<sub>2</sub>.

However, while the 60% reduction in water can be achieved through the implementation of a recycled water system, the 50% reduction in CO<sub>2</sub> emissions would require the installation of gas boosted solar hot water systems for each dwelling. The Bonnyrigg Masterplan indicates that gas boosted solar hot water systems will be installed only if feasible.

Under the Preferred Project the proposed incorporation of solar hot water heaters will improve the energy efficiency score by around 5-7%. Whilst this does not meet the 50% energy score, it is above the minimum 40% under the BASIX requirements.

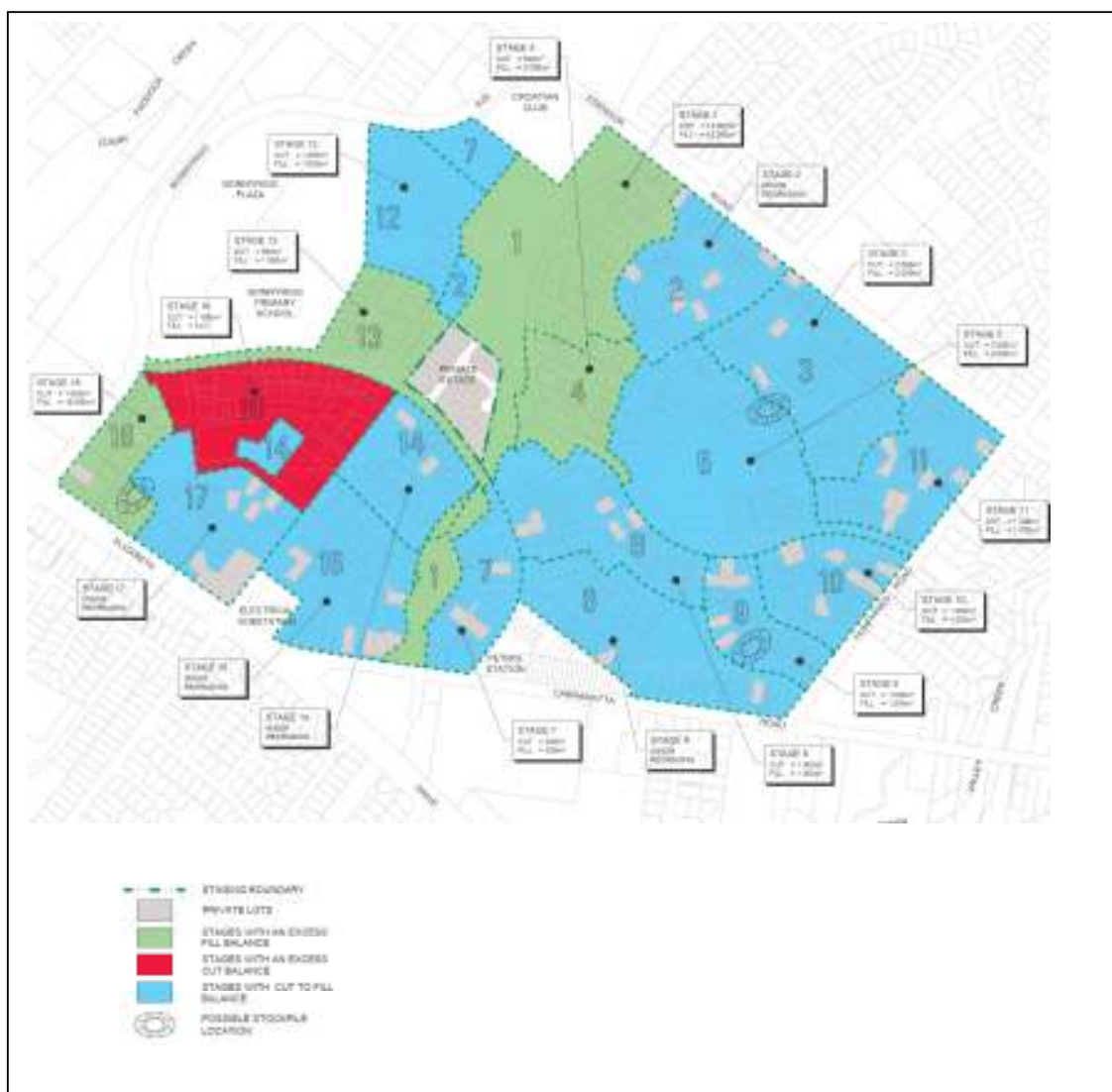
On this basis, it is considered that, while the stretch target for reduced water consumption will be achieved when the recycled water supply becomes available, the stretch target for reduced energy whilst unlikely to meet the 50% target is acceptable.

Notwithstanding this, the Stage 1 dwellings will comply with the minimum standards as required by the NSW State Government's Building Sustainability Index known as BASIX.

### 5.13 EARTHWORKS AND FILLING

Bulk earthworks associated with the proposal will generally be undertaken on an individual stage to stage approach however the stockpiling for and borrowing from stages has been reviewed on a whole redevelopment approach.

Accordingly, the regrading works to modify and enhance overland flow paths and to adjust the development platforms for new buildings will require the reuse, stockpiling, and borrowing of material from the entire development site as shown in the figure below.



*Cut and fill associated with the proposal*

Balance cut to fill from further modelling during the detailed design process will need to be undertaken for the development in an attempt to reduce the large volume of excess cut presented by the current site grading proposals. Re-grading of the proposed lots can be undertaken as part of this process to "lose" a large amount of spoil across the development. This method is considerably more effective than removal of the surplus from site.

For the majority of the site, the extent of cut and fill will be relatively minor, ranging from no more than 0.25m and includes the areas shaded blue in the above figure, where the residential stages are proposed.

There are also instances where cut fill will be up to or exceeding 1m on the more steeply sloping sections of the site where new residential development is proposed (e.g. near the corner of Elizabeth Dr and Bonnyrigg Ave) or where earthworks are required for the construction of drainage detention basins or new parks.

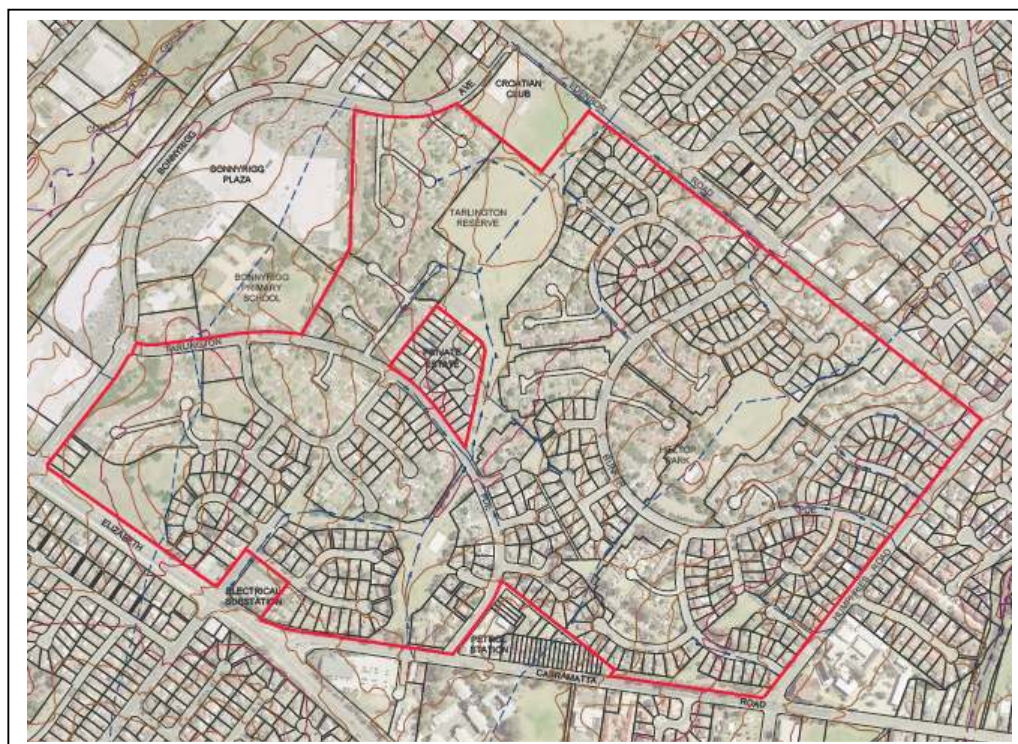
This degree of earthworks is considered reasonable having regard to the minor degree of cut fill on the majority of the site associated with the remainder of residential development and given that the earthworks in relation to parks and drainage areas result in a public benefit arising from these works. In addition, CoA will be applied to promote soil conservation measures and minimise the potential for run-off during the construction phase.

Issues relating to potential contaminants are dealt with under **s.5.25**

#### 5.14 STORMWATER & FLOODING

The existing stormwater catchment for the site comprises three main sub catchments (see figure below) as follows:

- Western catchment, bounded by Bonnyrigg Avenue and a western ridgeline. This features overland flow paths which drains towards the corner of Elizabeth Drive and Bonnyrigg Avenue;
- Eastern catchment, featuring overland flow paths which grade towards Humphries Road and eventually onto Green Valley Creek; and
- Central catchment, bounded by both the western and eastern ridgelines, overland flow paths allow runoff to be carried to the centralised overland flowpath, which runs South to North and bisects the proposed site and is contained within the open space system of the site. This catchment uses the existing stormwater infrastructure (both Council and DOH systems) as a low flow pipe to drain through the centre of site to the existing basin located at Tarlington Reserve and eventually downstream until flow reaches the creek system.

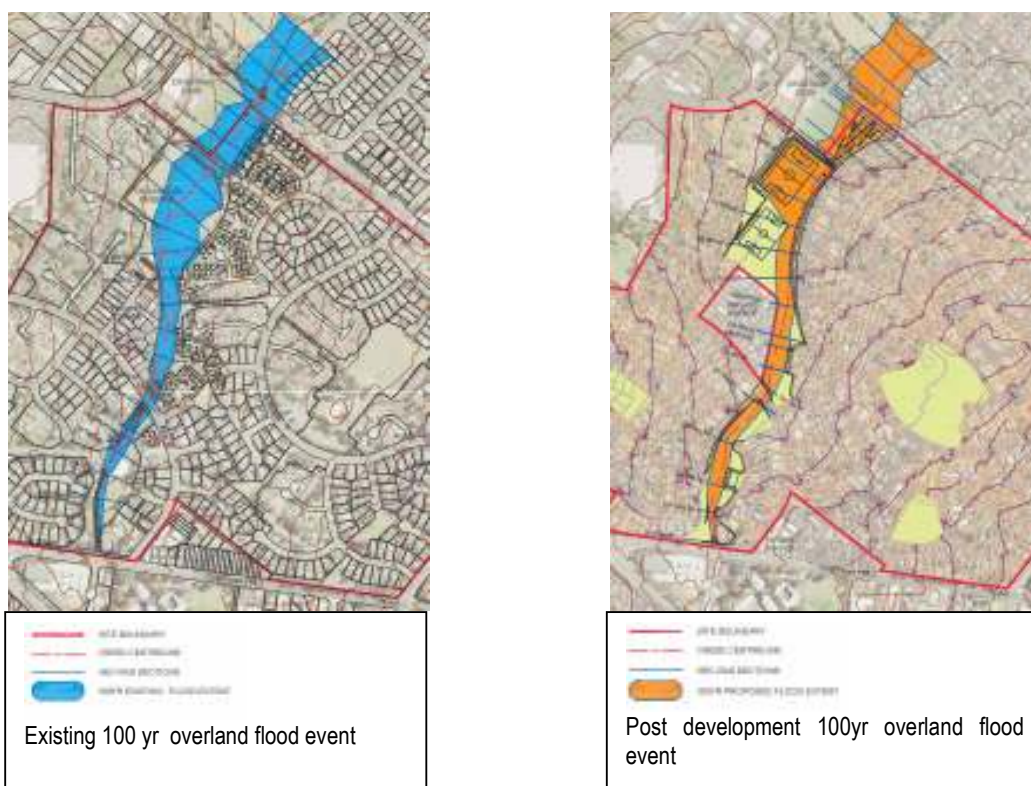




There are no natural creeklines within the site and the principle source for a potential flooding event that could impact on development within the site relates to overland flooding through the central catchment.

The proponents prepared a detailed Water Cycle Management Plan with the proposal and included extensive flood modelling in accordance with relevant Australian, State and local guidelines and standards.

This plan indicates that the 1 in 100 year (ARI) peak flows do not exceed those of the existing situation there will be no additional flood impacts on houses to be retained or on properties downstream of the site. This outcome is shown in the following figure which indicates that 1 in100 floods can be retained in the redeveloped open space system.



It is noted that the above figure includes reference to a 'creek centreline'. This is a nominal reference to assist defining the extent of the overland flooding. Under the proposed development this feature also delineates a proposed man made or 'artificial' creekline through the open space area (comprising a series of water treatment ponds and bioswales), designed to promote the aesthetics of open space and to capture and treat overland stormwater runoff from the new development on the site.

Under the proposal, this feature culminates in a water quality control pond toward the new entry to the site off Edensor Road as discussed in s.5.13.4 (below) of this report.

Flood modelling also included a sensitivity analysis for the catchments applying to the site. This included an analysis of the impact of a probable maximum flood (PMF) for the proposal. The critical issue arising from this analysis relates to the design specifications for detention basins and can be addressed through conditions of consent.

#### 5.14.1 Stormwater Management – Stage 1

The Stage 1 Project Application involves the construction of an above-ground stormwater detention basin with approximately 8,000m<sup>3</sup> of stormwater detention storage located within the Stage 1 public open space area. The stormwater detention basin will form part of the water feature located within the 'Entry Park', and will be integrated with the proposed open space infrastructure and landscape treatment.

Other stormwater infrastructure works include a series of water quality control facilities for treatment of runoff (including wetlands, rain gardens, bio-retention swales and sinks) prior to discharge from the site; construction of a new minor road stormwater system will total approximately 500 metres of pipe and associated pits and sub-soil drainage provided within the new roads and proposed tree wells will total approximately 1,200 metres of pipe.

Under the Preferred Project Report (PPR), the proponent submitted an amended Water Cycle Management Report to address issues in relation to; capacity, location and timing of construction for the proposed detention basins, the potential consequences to downstream properties in the event of a detention basin failure and the proposed measures to control downstream flooding.

The design concept for the on-site detention basin within Stage 1 is now considered acceptable, however, detailed designs will be required at Construction Certificate stage.

#### 5.14.2 Management During Construction

Issues relating to the management of flooding and stormwater are covered in an Environmental and Construction Management Plan that has been prepared for both the Concept Plan and Stage 1 of the Project (see **s.5.28**)

These plans set out requirements and recommendations for management of flooding and stormwater in relation to the following topics:

- Environmental issues (identifies the scope of flooding and stormwater issues)
- Compliance and Best Practice Guidelines (references relevant legislation and best practice guidelines)
- Environmental Goals (establishes key criteria for dealing with the scope of risks)
- Work Instructions (sets out minimum on site measures to address stormwater and flooding issues)
- Responsibility (lists the person(s) responsible for mitigating stormwater and flooding risks).

Further discussion in relation to the above is included in **s.5.28**. The key recommendation in relation to this issue is that conditions on consent should be imposed on the proposal to ensure formal implementation of an Environmental and Construction Management Plan to cover not only stormwater and flooding issues but also a range of other environmental issues and potential risks associated with the proposal.

#### 5.14.3 On-going Management

Issues relating to on-going management of stormwater and water quality infrastructure and devices are dealt with under the Voluntary Planning Agreement (VPA) prepared for the proposal, and in particular an Infrastructure and Services Delivery Plan that is linked to the VPA.

More detailed information about the arrangements made in relation to this topic are set out under **s.5.28** of this report.

#### 5.14.4 Water Quality

The proposed water quality treatment strategy for the site is incorporated within the following range of measures;

1. Development of a single stormwater facility for the western and central catchments, with potential off-site detention or water quality facilities to cater for the eastern catchment.
2. Creation of a water quality treatment train for treatment of run-off through the central catchment.
3. Sub-soil drainage provided within new roads and proposed tree wells.

Specific water quality devices featuring within this strategy includes;

#### Infiltration Devices

Consisting of a gravel beds and usually greater than 600mm depth, to removes sediments and attached pollutants (including nutrients, metals and other soluble pollutants) by filtration. These devices are proposed to be installed as conventional below ground trenches media or beneath permeable paving and are designed to capture and treat the "first flush" volume of a rainfall event.

#### Bio-Retention Systems

Bio-retention systems (similar to infiltration devices, but typically contain an extended detention zone) to be designed as larger 'rain gardens' along the central creekline within the central catchment. This system will contain water tolerant plant species to facilitate additional nutrient removal and designed to capture and treat the first flush volume. This system will also feature a water quality control pond near Edensor Road adjoining Tarlington Reserve (below)



#### Vegetative Filter Strips

Vegetative filter strips are relatively flat, open landscaped areas upstream of stormwater inlets that promote "sheet flows" reducing velocities and removing litter, vegetative matter and sediments by filtration through the vegetation. This filtration process also removes some nutrient and other pollutants that are bound onto sediment particles.



## Gross Pollutant Traps (GPT)

"Gross Pollutant Trap" is a term applied to either in-situ, or proprietary units that remove litter, vegetative matter and sediment. Although the numerous units fall under the one umbrella of gross pollutant traps, the actual mechanics of the different units vary, as do the achievable pollutant removal rates. GPTs come in a range of sizes, with the larger units able to effectively treat large catchment areas and high flow rates. They are usually sized based on their maximum treatable flow being equal to, or greater than the 3-month Annual Recurrence Interval (ARI) storm event (typically 50% of the 1-year ARI storm event) of the upstream catchment.

A total of 9 GPT are proposed under the development.

### 5.14.5 Water Re-use

Water re-use opportunities in the proposal have been examined under two reports prepared for the proposal;

- Ecological Sustainable Development – Environmental Opportunities Report
- Ecological Sustainable Development – Dwelling Design Report

The above reports identify a range of 'stretch' targets in relation to both water and energy re-use (relative to baseline BASIX targets) which are discussed in detail under s.5.10 and 5.11 of this report.

Water re-use (stormwater) measures featured within the development relate on Water Sensitive Urban Design features to avoid increases in stormwater flows for all events up to the 1-in-100-year Average Recurrence Interval Events.

This includes the provision of bio-retention systems (particularly a water quality control pond near Edensor Road) and rain gardens as discussed in the previous section.

Issues relating to use of recycled (non-potable) water for the development are discussed under s.5.27.3 and 6.3.9 of this report.

It is noted implementation of water re-use measures is supported by both the draft Statement of Commitments and Voluntary Planning Agreement.

## 5.15 GEOTECHNICAL ASSESSMENT

A combined contamination and geotechnical assessment report was submitted with the proposal having regard to the provisions of relevant legislation.

In terms of geotechnical considerations, the site is located on Blacktown Soil Landscape Group, which include soils derived from the weathering of the underlying shales and sandstones of the Wianamatta Group. Soils typically have low fertility and are often strongly acidic, and the underlying sandstone predominantly provides a dense drainage medium of northward flowing channels.

The Western Sydney Salinity Potential Map (Department of Infrastructure, Planning and Natural Resources of NSW, 2002.) indicates that subject area is subject to medium to low urban salinity potential. Geotechnical investigations carried out for the proposal indicated;

*none of the following signs of urban salinity were observed; salt crystals being present on the soil surface; 'Puffiness' of soil when dry, or greasiness on soils when wet; black staining on soils; presence of indicator vegetation species; die back of trees; or staining and marking of house foundations. Minimal soil patches were observed across the site, however these were contributed to wear and tear and vehicle access factors, not salinity.*

The scope and nature of urban salinity on the site is not yet fully understood as the geotechnical assessment did not specifically include testing for the sub surface potential for this issue. In this regard it is considered

appropriate to require a condition of consent requiring construction measures which safeguard against urban salinity hazards as is required for other residential development across Fairfield City.

## 5.16 GROUNDWATER

The Geotechnical assessment included a search of registered groundwater bores registered through the Department of Natural Resources and included twelve bores located within a 4 km radius of the site used for irrigation, groundwater monitoring and for dewatering purposes. The available information for these twelve bores was variable.

The closest of the groundwater bores was approximately 2.5 km SE of the site. Monitoring wells accessed shallow groundwater at approximately 4m in clay, while the irrigation bore was approximately 150m deep, drawing water from a deep shale aquifer.

In addition to the above, data was also collected from a monitoring well operated by geotechnical consultant located in Bonnyrigg Heights, 1.5 km West of the site. Groundwater was identified in this well at a depth of 9m.

Based on the information provided by the Department of Natural Resources and considering the relative elevation of the site, groundwater is expected to be contained within the fractures and bedding planes of the shale and sandstone. However there may be localised areas of seepage. The presence of the relatively impermeable sandy clays and shale layers at the site limits the potential for groundwater contamination, ultimately limiting the potential for contamination (if any) at the site to migrate via groundwater.

## 5.17 FLORA AND FAUNA

The Preliminary Environmental Assessment submitted for the proposal included a detailed analysis of flora and fauna and an eight part test of significance pursuant to the provisions of the NSW Environmental Planning and Assessment Act (1979), the NSW Threatened Species Conservation Act (1995), and the Commonwealth Environmental Protection and Biodiversity Conservation Act (1999).

Critical findings of this assessment are as follows;

*The vegetation was found to be no longer representative of any endangered ecological community. The area appears to have been largely cleared of almost all vegetation approximately 30 to 40 years ago.*

*The area would have once represented Cumberland Plain Woodland (probably Shale Plains Woodland) however the vegetation is no longer representative of any endangered ecological community or native vegetation community due to its high level of disturbance and simplification.*

*There are only remaining overstorey species generally within the open recreation/parkland areas. The overstorey species within these areas are represented mainly by Grey Box (*Eucalyptus moluccana*) and some Forest Red Gum (*Eucalyptus tereticornis*). These trees have no native understorey and the ground covers under these trees are represented by mown grasses as part of a maintained parkland/recreation area. No individual threatened species were detected and none are likely to occur due to the highly disturbed nature of the site.*

*No threatened species, populations or endangered ecological communities were detected in the surveys. The following threatened species were detected in the 5 km radius background searches. The results of the 10km grid search (centred on the study site) of the NSW NPWS Atlas of NSW*

*Wildlife indicate that the following threatened species have been detected within *Pimelea spicata* (E1), *Persoonia nutans* (E1), *Persoonia pedunculata* (E1), *Cynanchum elegans* (E1), and *Acacia pubescens* (V). None of these species were detected despite targeted searches being undertaken. Due to the highly disturbed and developed nature of the site none of the species are likely to occur and none were*

*detected in the surveys which were undertaken. Furthermore there is considered to be negligible potential habitat within the area examined for these species and there is unlikely to be any viable soil stored seed bank within the topsoil.*

*No species impact statement is required and no referral to Environmental Australia is required.*

During preparation of the environmental assessment requirements for the proposal, advice was sought from the NSW Dept of Environment and Climate Change in relation to the above advice who commented as follows;

"Due to the existing highly developed and cleared nature of the site the DECC agrees with the preliminary assessment that no further investigations will be required with regard to impacts on threatened species, population, ecological communities and their habitat".

## **5.18 TRAFFIC AND ACCESS**

### **5.18.1 Transport and Accessibility Management Plan (TMAP)**

The TMAP has been developed to assess the transport implications of the BLC Project to the Bonnyrigg area. The overall objective is to identify a package of appropriate transport measures and strategies to facilitate improved transport outcomes for the BLC Project. The TMAP aims to;

- Manage the transport impacts of the proposed development;
- Provide an integrated transport network between the modes and land uses;
- Provide alternative modes to private car to help reduce reliance on private car and allow optimum public use of public transport, walking and cycling;
- Provide a system that is efficient and comprehensively accessible; and
- Provide a healthy environment.

In order to meet the above objectives, consideration has been given to the following factors;

- Availability of alternative modes;
- Service frequency of public transport;
- Accessibility to non-car modes;
- Pedestrian amenities and quality of pedestrian environment; and
- Availability of parking.

The TMAP proposes a target of a 7-8% increase in public transport mode share (presently 5%) and proposes a stretch target of 10%. In terms of bus service delivery, it is anticipated that 90% of dwellings should be within 400m of a bus route during commuter peaks and day times. For night time services, 90% of dwellings should be within 800m coverage area.

In order to increase mode shift, a number of measures have been included in the TMAP including supply-side measures such as increasing the quality/quantity of bus/pedestrian and cycle transport supply, incentives such as limiting parking supply, roads to encourage public transport usage, various land use measures and various travel demand management policies or programs.

A package of measures has been recommended for implementation as part of the BLC project and includes the following;

- Infrastructure enhancements;
  - Pedestrian and cycleways –
    - Internal roads should be connected to the existing road network without compromising pedestrian and cycle access or creating diversions.
    - Connections to established paths to be provided and linkages to the regional cycle network along the T-way and along Elizabeth Drive should be constructed.

- Introduction of direct walking and cycling connections between residential zones to retail, education, and leisure zones within the Estate.
  - Easy access to public transport mainly along Tarlington Parade, Bunker Parade and Bonnyrigg Avenue.
- Bus infrastructure –
- The proponent to engage in early discussions with the Ministry of Transport and Westbus to advocate for good quality bus services and a secondary bus route on Tarlington Parade, Link Road and Bunker Avenue (figure below).
  - Bus stops and bus services should be in existence from the beginning of construction to ensure that residents are aware of the bus services available from the start.
  - Bus stops should be within easy walking distance (400m maximum) from all residences.
  - Bus stops should be of high quality and clearly visible with adequate shelter and seating to be provided.
  - Timetable information should be provided.
  - Upgrading of regional bus stops on major roads surrounding the development is recommended.



- Travel behaviour change –
  - A travel plan framework should be developed to outline the following; existing transport services available in the local area, access to information on travel to the site, review of local pedestrian and cycle network, timescale for initiative, and details for future monitoring.
  - Aim to achieve behaviour change by ensuring that public transport services and infrastructure are made available and to ensure that the community is aware of their existence and the benefits of using these facilities.

- Bus stops should be highly visible.
  - Leaflets and timetables should be made available through letterbox drops, readily available at local shopping and community centres.
- Engineering improvements –
  - Ensuring buses can easily negotiate the proposed route.
  - Ensuring cycleways and pedestrian footpaths are provided.
- Intersection improvements – Two intersections from the 2007 base model that would require capacity enhancements include;
  - Cabramatta Road/Humphries Road – additional right turn lanes for all 4 approaches; and
  - Smithfield Road/Edensor Road – Additional through lane on both legs of Edensor Road.

As part of the assessment of the above measures, Council commissioned an independent review by a Traffic expert. The assessment found that increasing the public transport mode share from the existing level (5%) to 7-8% was considered conservative but realistic. It was noted however that the Liverpool-Parramatta T-way is a major opportunity for the BLC Project and that the BLC Project could better integrate with the existing Bonnyrigg Town Centre with strong pedestrian connections. There is considerable opportunity in partnership with Bonnyrigg Plaza, to create a through site link connecting the project site. The assessment also suggested that further consideration should be given to bus priority lanes as these make public transport more appealing to commuters. It was acknowledged though that this measure may be beyond the scope of the proponent's responsibilities.

The EAR was initially referred to the Ministry of Transport where a number of issues were raised (see s. 6.3.4). The proponent subsequently amended the TMAP and the Ministry of Transport have indicated that they no longer raise any concern with respect to the measures proposed.

Consideration of physical connections between the existing regional cycleway network external to the estate and the proposed cycleway network within the BLC Project revealed that there are 2 missing linkages. These include the connection between Edensor Road and Bunker Parade and the southern side of Cabramatta Road West to the northern side of this road. It is noted that the cycleway would need to traverse over private land along Edensor Road (Jadjuk Wanderers Club). Accordingly, it is recommended that these connections be provided. It is noted that the infrastructure services plan associated with the VPA has included a deliverable with funding to provide connections to cycleways outside the estate. This issue has therefore been appropriately dealt with.

The TMAP also considered likely increase in traffic generation and considered the impact on the operation of surrounding intersections. The intersection analysis considered the performance of intersections for the 2010 and 2020 scenarios. Based on the analysis undertaken, it was concluded that Edensor Road be widened to include 3 through lanes at the intersection of Smithfield Road, and additional right turn lanes for all 4 approaches at the intersection of Cabramatta Road and Humphries Road is necessary to accommodate additional traffic volumes anticipated from the proposed redevelopment.

The TMAP stipulates that the results of the modelling revealed that the intersection upgrades identified are already necessary to provide additional capacity for the existing traffic levels therefore, are required regardless of the planned density increases of the proposed redevelopment.

As such, the proponent proposes to contribute a proportion of the cost to the upgrading of the above intersections with the proponent contributing 6.5% of the cost of the Cabramatta Road/Humphries Road upgrade and 7.5% for the Smithfield Road/Edensor Road upgrade.

The Concept Plan and Stage 1 Project application was referred to the RTA who raised concern with respect to the traffic modelling and did not agree with the proponent that they contribute to a proportion of what the proposed redevelopment would generate in terms of increased traffic generation. The RTA also did not agree with the average traffic growth rate applied to the traffic modelling at 0.4%, rather, this should be 1.4%.

As part of the Preferred Project Report a revised TMAP was submitted and referred to the RTA. Further meetings and discussions took place between the RTA and proponent to resolve these issues. This resulted in the RTA providing updated advice which indicates that in relation to the cost of apportionment for improvements, the RTA have no plans for upgrading these intersections and funds for this type of facility are limited and allocated on a state wide priority basis for site which have the greatest need (see s. 6.3.3)

In addition, the RTA have advised that a range of data remains outstanding and recommends that these issues be addressed and resolved prior to the issue of any development consent (see s. 6.3.3). Similar conclusions were also reached by the Traffic expert who reviewed the revised TMAP on behalf of Council.

It is considered that the proponents request to contribute on an apportionment basis is reasonable. However, this is an issue that needs to be negotiated and resolved between the proponent, RTA and the Department of Planning. At the time of writing this report, this matter has not been satisfactorily resolved. Accordingly, it is recommended that this matter be negotiated between the parties with a view to seeking resolution as to the required works that will form conditions of consent to this development or other suitable arrangements.

### 5.18.2 Parking

The Bonnyrigg Masterplan requires the provision of the following on-site car parking:

- Detached dwellings 2 spaces
- Attached dwellings
  - 1 or 2 b/r 1 space
  - 3 b/r 1.5 spaces
- Visitor parking will be provided on-street.

In comparison, the Fairfield City Wide DCP 2006 requires 1 carspace for 1-2 bedroom dwellings, 1.5 carspaces for 3+ bedrooms and 0.25 carparking spaces for visitors. Accordingly, the parking rate proposed for the BLC Project varies from Council's standard controls.

This issue was raised by Council and discussed at length with the proponent, particularly in relation to the absence of visitor parking. In response, the proponent has provided the following comments in their PPR as follows;

*"Overall, it is considered that the application of the car parking rates in the Fairfield City-Wide Development Control Plan 2006 would be inappropriate as the prescribed rates are excessive and would result in a poor urban outcome, having regard to:*

- *Encouraging the continued use of the private motor car as a primary means of transport.*
- *Discouraging the use of alternative forms of transport, such as public transport, cycling and walking.*
- *Visual impacts of an over supply of car parking.*

*The car parking rates prescribed in the Concept Plan are considered appropriate for the site, taking into account the strategic objectives of land use and transport planning, for the reasons outlined below:*

- *Parking surveys conducted at developments located in Malabar, Blacktown and Parramatta that are similar in size, scale and intensity to that proposed at Bonnyrigg that show parking supply exceeds parking demand. It is noted that the parking surveys undertaken at Bonnyrigg show similar results to these developments and it is considered unlikely that a slight restriction in parking supply would adversely affect residential or visitor parking convenience.*
- *Proximity of the site to Bonnyrigg Plaza and Liverpool to Parramatta Transitway.*
- *Extensive infrastructure investment in improving pedestrian and cycle access across the site to encourage modal shift away from the private motor car.*
- *The effectiveness of parking as a measure to discourage car use.*

*Further, the proposed Concept Plan provides for a significant number of additional on-street car parking spaces. The proposed road layout increases the potential number of on-street car parking spaces through the provision*

*of vehicle access to the rear of the dwellings via the access places. This means that the primary access streets are less disrupted by vehicle driveways, providing significantly more on-street car parking spaces on the primary access street in the locations where visitors wish to park, in close proximity to the front door of individual dwellings."*

The proponent contends that the proximity of the Liverpool-Parramatta Bus Transitway, parking studies conducted of other similar developments, improvement of pedestrian and cycle access across the site and effectiveness of parking as a measure to discourage car use justify the parking rates proposed for the redevelopment. It is considered that the proponent raises some relevant points in relation to this issue.

The proposed development pattern of the site is generally broken up into 2 overall components. The western portion comprises of attached dwellings and these are provided with road access at both front and rear of the sites. This is intended to provide rear lane access for vehicles leaving the front access available for on-street parking. The eastern section of the site is not provided with rear access streets but is developed for detached dwellings with frontages to the street.

In relation to the detached dwellings, it is anticipated that this would be reflective of a standard suburban layout with garages facing the street frontage and a driveway access leading to a garage. The Masterplan requires garages to be setback 5.5m from the street frontage which would allow an additional parking space located within the site. This is considered acceptable for the purposes of accommodating visitors to the site and is an accepted practice for standard residential developments of this nature in Fairfield. Furthermore, Council's controls do not require visitor parking to be provided for detached dwellings on separate lots of land.

In relation to the attached dwelling precincts, it is accepted that the proposed access streets will increase supply of on-street parking as the access streets (8m laneways) will accommodate parking spaces to the rear of the dwellings and free up kerb space along residential streets. The quantity of additional carparking spaces however is unlikely to be equivalent to Council's parking controls for visitor parking. This is evident with respect to the Stage 1 project application and is considered further below.

The Stage 1 Project Application (106 attached and detached dwellings) is required to provide 157 parking spaces on site. It is noted that Stage 1 provides 192 on-site car parking spaces, well in excess of the minimum requirement.

As already noted, Fairfield City-Wide DCP 2006 requires the provision of 1 and 2 spaces on site per dwelling, plus 0.25 spaces per dwelling for visitor parking. For Stage 1, Council's DCP would require 192 resident parking spaces plus 26 visitor spaces to be provided on site (total of 224). When compared with Council's DCP, Stage 1 has a shortfall of 32 spaces.

The proponent contends that by providing resident parking within the rear access streets of Stage 1, there is no need to provide driveways from the main street. This frees up on-street parking directly in front of the dwelling. Council's traffic engineer has calculated that, due to the provision of rear parking, an additional 14 spaces are generated on the main street (new Bunker Parade). Based on this, Stage 1 has a total shortfall of 18 spaces, when assessed in accordance with the Fairfield City-Wide DCP 2006.

This shortfall in parking is considered acceptable and should not create adverse traffic/parking conditions for Stage 1.

It is also important to note that, within Stage 1, approximately 45 on-street parking spaces are provided on the eastern side of new Bunker Parade, adjacent to the Stage 1 public open space area. While it is considered that these spaces are for use by the general public, they may also alleviate any parking congestion experienced within Stage 1.

Upon examination of the application of parking for Stage 1, arguments put forward by the proponent, TMAP measures proposed regarding mode shift (see s. 5.17.1), proximity to the Bus T-way and the provision of further on-street parking being made available due to the proposed access places, the parking rates proposed are considered to be acceptable.



### *Vehicle Access and Manoeuvrability*

Initially, the main concern for Council in relation to accessibility within the estate was the 8 metre width of the proposed rear access roads. Combined with the location of the proposed garages within the rear access places, sight distance was considered limited and vehicle manoeuvrability constrained. The proponent has addressed this issue by providing a 10km/h speed environment as well as the provision of appropriate surface treatment to the entrances of the rear access places, which give the impression that they are private and are not to be used as thoroughfares.

On this basis, Vehicle Access and Manoeuvrability within the Stage 1 Project Application and Concept Plan is considered satisfactory.

### **5.18.3 Construction Traffic Management**

The main issue regarding traffic management is the health and safety of workers, visitors and the public as they travel around, or through the development area. There are a large number of private dwellings within the development that will require permanent access.

The Stage 1 Environmental & Construction Management Plan prepared by Hughes Trueman, Amendment 1, dated May 2008, recommends that a Traffic Control Plan be prepared and certified by a person accredited to prepare traffic control plans in accordance with AS1742.3 and the Roads and Traffic Authority's publication "Traffic Control at Worksites", prior to the commencement of any work. The Traffic Control Plan shall be implemented during the construction phase of the development and a copy of the plan shall be available on site at all times.

In relation to future stages, it is recommended that an Environmental and Construction Management Plan be prepared for each stage of development which considers the relevant impacts including traffic management measures. It should also consider the location of private residences and measures to minimise their impacts. This can be appropriately conditioned.

## **5.19 SOCIAL IMPACTS**

### **5.19.1 Likely Social Impacts to the Community**

A Social Impact Assessment (SIA) was prepared to fulfil the requirements of relevant Heads of Consideration in relation to the Environmental Assessment Requirements (EAR's) in particular, those related to 'likely social (including cultural) and economic impacts' and 'the public interest'. The SIA sets out the likely positive and negative social impacts in the locality against the objectives and key project proposals, and balances these in forming a view as to the overall impacts of the project.

The SIA provides 3 levels of documents; firstly, the executive summary which provides a detailed summary of the SIA document, secondly, *SIA: key findings and Recommendations*, which provides a summary of key sections of the SIA including tables for all impacts identified in the study, and proposed mitigation strategies, and thirdly, the full SIA, which provides supporting data, evidence and professional opinion for the findings.

The SIA is a very detailed and comprehensive report which considers human services and facilities, safety and security, social and physical integration, community strengths and capacities and community well being, amenity impacts, impacts on private home owners within the estate, social impacts related to housing management, economic impacts in the social realm and consideration of the public interest. The SIA also looks at health impacts and makes reference to both State and Federal Guidelines for healthy living, including the Premier's Council for Healthy Living (PCAL) *'Planning and Design Guidelines'*.

The methodology undertaken in the preparation of the SIA included a review of project materials, extensive community consultations conducted for the purpose of this project, review of key literature, primary research and a range of secondary resources, as well as the expertise of the author of the SIA.

Key findings of the SIA reveal that there are likely to be a range of positive and adverse impacts arising from BLC Project and that these impacts are differently distributed at various geographic scales and upon different population groups. It is also suggested that most of these impacts can be mitigated through the proposals and recommendations set out in the summary tables in the SIA's *key findings and recommendations* summary tables and in full detail in the SIA.

In terms of likely impacts on the secondary locality (suburbs immediately surrounding the site at 3km radius), tertiary locality (Fairfield-Liverpool subregion) and wider locality (Greater Sydney Metropolitan Region) it is considered that these impacts will be largely positive and arise from increased urban efficiencies including housing choice within a well-located site close to transport, employment and services. The development of a Senior Living area will also make an important contribution to housing choice for an ageing population, which will assist in ensuring that existing tenants who are older or have a disability can remain in the area.

The rebuilding of all social housing stock within the estate (with the exception of 134 dwellings which will be located elsewhere within the Fairfield area) is considered to be a highly positive mitigation measure proposed by the proponent. However, it is suggested that given the state of the housing market in Fairfield LGA, all social housing not redeveloped on site be replaced within the Fairfield LGA.

Negative impacts likely to be experienced in the wider locality include amenity impacts in relation to increased traffic movement at key egress points, particularly adjacent to key facilities, and in the short to medium term, physical impacts from the demolition and construction process.

In terms of the primary locality (Bonnyrigg Living Communities Area - BLCA), the impacts are likely to be more diverse and unequally distributed. Positive impacts include improved public domain amenity including attractive well equipped parks, improved streetscapes, and new, more environmentally efficient housing than currently exists. More manageable backyards may benefit older residents or those who do not care for a large backyard.

Further benefits include the likelihood of improved service co-ordination and delivery proposed under the Community Renewal Services Plan, and Community Services – Implementation Plan, through all community renewal and communication services located within the Community Precinct.

Other positive impacts in the renewal area include improved public domain safety through the redesign of the current Radburn layout of the estate, and improved connectivity within the BLC area and surrounding shops, services, transport links, as well as other urban areas.

The BLC project supports the objectives of the NSW Premier's Council for Healthy Living (PCAL) Planning and Design Guidelines through the urban design development of a walkable community close to shops, transport, open space and services, diverse recreational opportunities and increased safety through various aspects of urban design including the de-radburning of the estate.

Negative impacts likely to be experienced within the primary locality (BLCA) include the following;

- **Safety and security** – the potential for amenity impacts related to noise, dust, vermin, as well as the potential for a more unsettled and unsafe area, is likely to be experienced by those within and adjacent to the stage under demolition or redevelopment. The ability for tenants to remain or be relocated within the estate is a positive mitigation measure however the downside is the potential for a seriously deteriorating, and less safe urban environment. As such, the development of the Re-housing Strategy and Environment and Construction Management Plan should mitigate these impacts.
- **Social and physical integration** – there is a possible risk that residents will become 'outsiders in their own community', a concern that has been expressed many times during consultation. Housing that is indistinguishable between public and private housing is important in this regard, and the proponent proposes to do this. There are also some risks with an apparent 'dilution' of disadvantage, where the continued disadvantage of a large number of households (around 700) is masked by the averaging

effect of such dilution. Continuing advocacy for the needs of the most disadvantaged will be required to address this risk. The Community Renewal Services Plan assists in mitigating this issue.

- **Community strengths, capacity and well-being** – Bonnyrigg is a community with considerable community cohesion and social capital compared with other areas in Western Sydney. These community networks include support between neighbours and from community, cultural and religious institutions. These impacts are also related to social health impacts regarding measures of social well-being, and intersect with 'cultural impacts'. The redevelopment has the potential to raise significant issues of loss, grief and stress, particularly for more vulnerable tenants. The fact that most can stay in Bonnyrigg is a significant mitigation. The loss of neighbours and the stress associated with moving is an impact that is likely to be difficult to mitigate, and will be a residual impact of the project. It is noted that a re-housing strategy has been proposed which may mitigate some impacts associated with this issue.
- **Amenity impacts** – The issue of major changes to housing types and densities proposed has attracted by far the most concern during community consultations, particularly in relation to living closer may exacerbate neighbourhood conflict and the loss or significant reduction of private outdoor space is also a serious issue for a majority of tenants. This has been addressed by the proponent through significant amendments to dwelling designs and typology, as well as increasing the number of dwellings that have access to a yard. It is recommended that a community garden as proposed within the community precinct is supported to address this issue as well as other mitigation measures under the community renewal services plan. It is difficult however to mitigate an impact on the loss of gardens that have special meaning for those who cannot afford recreation options as well as gardens as productive spaces for some cultural groups.
- **Private owners** – The loss of cul-de-sacs provides a significant amenity impact in the view of some private owners as these are viewed as places of safety, quiet and for neighbourhood interaction. The loss of these spaces will be mitigated to a certain extent by improved parks within walking distance however the through-roads are likely to be busier. This is likely to be a residual impact as a result of the redevelopment. Another negative impact relates to amenity and safety impacts during the development stage as the estate empties out and is demolished. The SIA recommends that the proponent develop a charter or MOU with private owners to ensure transparency and consistency. This is considered a reasonable and appropriate mitigation strategy and will form a condition of consent.

In addition to the SIA, the proponent has submitted a number of detailed documents to fulfil the requirements of the Department of Planning's EARs requirements, namely;

- Community Renewal Services Plan (CRSP)
- CRSP – Implementation Plan
- Rehousing Services Plan
- Crime Prevention Through Environmental Design (CEPTED) Assessment report; and
- Social Infrastructure Needs Analysis: Final Report.

The above documents provide a range of recommendations and strategies to ensure that the redevelopment addresses social, cultural, health and economic impacts through the social realm. Further discussion of CEPTED is discussed in Section 5 of this report.

In order to further consider the social impacts, it is important to understand the existing social profile and population forecasts of the redevelopment.

The population profile of the existing community within the estate can be summarised as follows;

- Almost half the population were **born overseas** (47.3% of the 2899 population). English was the most common language followed by Vietnamese (29.1%), Khmer (7.3%), Arabic (6.5%) and other Chinese languages (5.2%).
- The proportion of **Indigenous** residents is 5.3%. This represents more than double the proportions in Fairfield (0.6%), Liverpool (1.3%), Sydney SD (1.1%) and NSW (2.1%).

- The largest proportion of residents is **aged 10-19 years** (22.8%), followed by the 20-39 age groups (22.2%).
- The **unemployment** rate within Bonnyrigg Estate is 29.2%. This is significantly higher than Fairfield (12.7% and four times the rate for NSW (7.2%).
- The weekly **household income** on the Estate (\$590) is approximately half that of Fairfield LGA (\$1,078) and NSW (\$1,263).
- Over three quarters (77.5%) of the Estate do not have a post **secondary qualification** in comparison to 65.4% in Fairfield LGA. Over one third of Estate residents left school before Year 10 (36.7%). This is double the rate for NSW (18.2%).

Key points in relation to Population forecasts can be summarised as follows;

- The population on the Estate will increase from approximately **2895 in 2006 to 6032 in 2021** an increase of 108%;
- The most significant population increase is projected to occur between 2016 and 2021;
- The Estate is likely to have a major increase in people aged 55 and over (an extra 1,319 or a 240% increase);
- There are also projected significant increases in the number of children aged 0-9 years (265 extra children or a 68% increase); and
- There will be relative normalisation of the population in relation to the proportion aged 10-19 years, which is expected to reduce to around 12% by 2021.

Population forecasts were based on a number of assumptions related to dwelling mix, occupancy rates and underpinned by the 2006 Census baseline figures. It is noted that the occupancy rate used in the population forecast was 94% which appears to be high, possibly resulting in a likely underestimation of the total population growth. This would clearly have flow-on effects with respect quantity of open space areas projected to meet the demand of the incoming population and community services proposed to meet the needs of the redeveloped estate. Discussion with the proponent's planning consultant indicates that the 94% occupancy rate was based on 100% occupancy rate for the private dwellings and 80% occupancy rate for the public housing dwellings. The 94% rate is the average of those two rates.

It is therefore arguable whether an 80% occupancy rate would occur with respect to the public dwellings once the redevelopment is complete. On this basis, if a 100% occupancy rate were applied in isolation of all other assumptions that determine the projected population forecast, then it is possible that the population forecast could be in the vicinity of 6,393 (an additional 361 residents). How this potentially impacts on the quantity and quality of open space and provision of community services will be discussed in further detail in the relevant sections of this report.

#### 5.19.2 Issues identified as part of assessment of SIA

The following issues have been identified as requiring further discussion and consideration as part of the redevelopment of the estate and its potential impact on the existing and incoming community. These are identified as follows;

- **Lifted apartments in terms of impact on children and young people** – the full impact of a high density rental market on children and young people is relatively unknown. The Randolph 2006 research identifies numerous health issues including increased risk of becoming overweight, behavioural problems and social isolation. In order to address this issue, it is recommended that those families with children and young people not be located in lifted apartments where possible.
- **Older people** – it has been forecast that older people within the estate who will be 70 years and older will increase from 161 in 2006 to 845 in 2021 which represents an increase of 50%. As such, it is

important that the relevant services and accommodation are implemented to accommodate this need at the appropriate stage. It is noted that the Community Renewal Services Plan proposes to develop a Seniors Living Precinct in close proximity to Bonnyrigg Plaza and public transport to include 150 private seniors living units, 110 place low and high care facility, and an 80 unit public housing complex targeted at older people or people with a disability. It is anticipated that this will occur at Stage 12. Although this addresses the issue of accommodating aging in place, the timing of providing this accommodation should be reconsidered, that is, consideration should be given to moving the staging forward in response to the projected population indicators. Furthermore, 70 of the proposed 172 lifted apartments earmarked for public housing should be allocated to older people (55+ years) under a local allocations strategy as recommended in the SIA findings (pp. 78)

- **Children** – children aged from 0-12 years are projected to increase by 68%. The importance of the early years is underestimated in the SIA; this is a key group in ensuring the redevelopment produces positive outcomes for children and their families. The SIA considers early learning centres however does not consider the importance of the early years. Whilst the Community Renewal Services Plan has limited strategies to mitigate potential negative impacts, and the proposed multi-purpose community centre provides space for activities for this age group, the need to attract services to the area is critical in ensuring better outcomes for children. It is recommended that enhanced mitigation strategies for children 0-12 years be further developed.
- **Indigenous population** – The current indigenous population within the estate is 5.3% which represents more than double the NSW proportion (2.1%). Assessment of the SIA indicates that the impact on this community has not been fully considered. Further, it has been indicated that the majority of indigenous tenants wish to relocate, which therefore highlights the need to reconsider the true impact of the redevelopment on this community. What is currently a strong and supportive community may become isolated and fragmented. With the redevelopment occurring over a period of 13 years, it is recommended that further consideration is given to the impact of the redevelopment on the indigenous community and appropriate mitigation measures be developed.
- **Multi-purpose community facility** – the proponent has proposed under the provisions of the VPA to embellish a number of key facilities including a community facility, library, parks and open space, roads and cycle ways. The SIA considers the impacts of the redevelopment on services and facilities and recommends that a community facility should be provided with an area of 850m<sup>2</sup> to meet the likely demand on services and facilities. It is noted that the VPA includes this facility however the overall area of the building proposed is 621m<sup>2</sup>. The size of the building does match the recommendations outlined in the SIA. Accordingly, the parties have negotiated that in lieu of the recommended floor space of 850m<sup>2</sup>, the proponent has agreed to dedicate the land for the community facility including the community garden to Council. Accordingly this issue is sufficiently dealt with.
- **Open Space** – The estate presently maintains an open space system with a total area of 15.06 hectares. This includes areas presently zoned residential and includes all walkways leading into the open space areas. When these areas are discounted, the remaining open space area comprises approximately 11.9 hectares. The redevelopment therefore provides 1.99 hectares of open space per 1,000 population. As previously indicated, the occupancy rate of 94% appears to generate an overall under estimation of the projected population. If a 100% occupancy rate were applied in isolation of all other assumptions, then the rate of open space per population is likely to drop to 1.87. Given the increased densities and proposal for small private open space areas (25m<sup>2</sup>), this may present an issue of whether an acceptable level of open space has been provided to offset any reduction in private open space areas. What must also be factored into the discussion is whether the quality of open space in terms of the proposed embellishment and functioning of recreational spaces is sufficient to compensate for a reduction in the availability of open space areas based on the projected population. Importantly however, there does not appear to be any **net loss** in overall open space area, just an increase in the overall densities and population proposed. Furthermore, the Bonnyrigg Town Centre Park, and St John's Park are in close proximity and the western Sydney regional parklands is also in reasonable proximity to the estate. Notwithstanding this, it is acknowledged that the Fairfield City Health profile indicates that Fairfield has relatively poor health and the health status of the City only highlights the importance of urban planning for the area. A possible solution to the availability of open space may be remedied by ongoing mitigation strategies to promote healthy living and strategies to involve residents in the use of parks and recreational facilities. Furthermore, private open space within residential developments should also be increased based on the above issues.

- **Private owners** – There are presently 86 privately owned dwellings within the estate which include both dispersed dwellings and clusters of private homes throughout the estate. Specific impacts include safety and security during the construction phase and that inconvenience and disruption is minimised. In order to ameliorate these impacts it is recommended that the proponent enter into a memorandum of understanding outlining measures and procedures to reduce and/or minimise amenity impacts during the construction phase. This is considered appropriate and can be mitigated by a condition of consent.

### 5.19.3 Mitigation Measures Proposed

A Community Renewal Services Plan (CRSP) and Community Services Implementation Plan have been developed by the proponent and the findings and recommendations of the SIA have been 'fed throughout' these documents and reflected in the principles of the CRSP.

The CRSP presents a holistic approach to community renewal for the Bonnyrigg Estate. The major areas of need identified by the preliminary gap analysis were employment services, youth services, employment, education and training services, crisis support services, family services, aged accommodation and support services and services related to disability including mental illness.

The CRSP is a comprehensive strategic document which identifies 13 key strategies of which sets the foundation for renewal of the next 30 years. In summary, these include;

- Strategy 1: **Social Impact Assessment and Mitigation** – identifies the risks to the community associated with the redevelopment, and suggests that mitigation strategies need to be revised regularly based on an evaluation of its effectiveness.
- Strategy 2: **Management Integration** – Outlines the structure of how the proponent will support the implementation of the CRSP. The key to the structure is the appointment of a general manager who will be responsible for the day-to-day operations and implementation of the CRSP. Key principles include integrated service delivery, single access point, integrated system and participation.
- Strategy 3: **Community Development Funding** – the proponent proposes the establishment of a Community Renewal trust for the specific purpose of raising funds to invest in community renewal activities in Bonnyrigg in perpetuity.
- Strategy 4: **Multipurpose Neighbourhood Centre** – the proponent proposes the establishment of a community facility under a VPA. This strategy also suggests that a childcare centre may be a viable option however the Social Infrastructure needs analysis questions the operational need for such a service in the commercial area. It is recommended that further analysis should be undertaken prior to any commitment being made with respect to this issue.
- Strategy 5: **Community Capacity Building** – key initiatives proposed to build social capital include recognizing and relating to representatives and consultative bodies, encouraging and supporting participation in community life, and resourcing a tenant's advocacy service. The proponent describes taking a strengths based approach to the development and the building of social capital is considered critical to the success of the renewal of the estate.
- Strategy 6: **Integrated Community Services** – outlines the strategic intent to network and co-ordinate efforts in specific areas identified in the preliminary gap analysis. Family support programs outlined in this strategy are considered limited in detail. It is recommended that further investigation and an implementation plan be undertaken to reduce the impact of the redevelopment on children. The multi-cultural strategies proposed are considered acceptable however strategies to engage the indigenous community is limited. It is recommended that specific strategies be developed to ensure that the indigenous community are engaged in the process.
- Strategy 7: **Employment, Education and Training** – proposes measures and strategies to increase employment and training opportunities to residents within the estate. The strategic range of employment training options is considered extensive however does not commit to real employment. Accordingly, it is recommended that KPI's are established for real employment solutions.
- Strategy 8: **Health and Well Being** – proposes to ensure that high levels of health and safety are achieved, implementation of a counseling and support service, and augmentation of mental health services. The implementation of support services is essential in mitigating impacts at the foundation

stage of the redevelopment and the proposed strategies are likely to achieve this. It is noted however that there are no strategies in place regarding open space and recreational areas. This is relevant as indicated above in relation to issues of quantity. On this basis, it is suggested that strategies are developed to ensure maximum use of open space facilities to mitigate this impact.

- Strategy 9: **Aged and Disability Accommodation and Services** – proposes to provide a range of accommodation targeted at aged and disabled people as previously mentioned in this report. This strategy is considered appropriate and reflects those described in the SIA for this stage of development. It is recommended that more detail should be provided at the appropriate stage to ensure that migrations identified in the SIA are implemented.
- Strategy 10: **Affordable Housing Strategy** – proposes a range of options and strategies to assist potential home buyers to enter the market who may not be able to do so if these options were not available. This strategy is considered appropriate and reflects those described in the SIA. However it is suggested that expert advice is sought to ensure that affordable housing strategies are in the best interest of potential residents.
- Strategy 11: **Community Action for Sustainability** – proposes a range of projects and initiatives including Westpac operation backyard, community food gardens, community artwork installations, employment and training programs, earth helpers, and community visit to Fairfield City Farm. This strategy is considered appropriate and reflects those described in the SIA.
- Strategy 12: **Intensive Tenancy Management** – proposes 4 strategies to address housing management; resource a tenant's advocacy service, provide a visible presence, provide proactive tenancy management and early intervention services to social housing tenants, and provide access to counseling and support services. The SIA identified numerous mitigation strategies to address identified impacts of the redevelopment. These have been addressed in the Housing Services Plan.
- Strategy 13: **Monitoring and Evaluation** – proposes 3 strategies as follows; customer satisfaction survey, longitudinal study and research into community participation. The proposed evaluation strategies are clear and should provide a platform to ensure the project meets its objectives. This strategy is considered appropriate and acceptable. However, annual evaluation reports should be submitted to Council with an annual Community Renewal Plan, which reflects the status of the redevelopment.

The **Community Renewal Implementation Plan** sets out how the key strategies within the Community Renewal Services Plan will be implemented. This document covers the first 3 years of development (2007 – 2010). It is recommended that this plan be updated on an annual basis and forwarded to Council for review.

The proponent has also prepared a **Rehousing Services Plan** which sets out a range of objectives and procedures with respect to the rehousing of tenants. It is noted that the proponent will give at least 6 months written notice before relocation offers are made. It also stipulates that tenants shall move no more than 2 times but wherever possible, only once, tenants will be compensated for all reasonable relocation costs and for improvements made to their property. Furthermore, the the proponent will respond to requests from tenants regarding special needs such as health related needs and minimising disruption to schooling, and tenants wishing to stay in Bonnyrigg will not be required to move to temporary housing off site, where possible.

The timeframe for moving tenants however will need to be considered against the risk of safety and security for the area. This is a matter that will require careful management by the proponent to ensure that this issue is appropriately mitigated during the construction and development phase of the redevelopment.

In summary, it is considered that the proponent has included relevant strategies to appropriately mitigate any likely social impacts that may occur as a result of the proposed re-development. Any areas that require further attention has been highlighted in the above assessment and recommendations provided in the relevant sections above. These matters highlighted can be conditioned to ensure that mitigation of these impacts are appropriately achieved.

## 5.20 ECONOMIC IMPACTS

An Economic Impact Assessment prepared by MacroPlan Australia was conducted to consider the economic impact of the BLC project.

The report also considered retail opportunities in relation to the proposed community precinct located within the BLC Project.

Total expenditure impact of the BLC project is estimated at \$902 million (in net present value terms) over a 20 year period from 2008, comprising \$265 million in construction (infrastructure, residential and community), \$122 million in maintenance and \$515 million in resident expenditure.

Total direct employment generated from the construction and development of the estate will average 265 per annum during the construction phase. There will also be 111 jobs per annum generated from ongoing maintenance and 575 jobs from residential expenditure over the 20 year assessment period. Indirect employment was estimated to be 1,196.

In relation to the potential retailing opportunity within the community precinct area, MacroPlan has conducted a retail sustainability study to indicate the amount of floor space that could be incorporated within the redevelopment without compromising the retail hierarchy of the study area.

MacroPlan concludes that there is an opportunity for a neighbourhood centre within the estate which could provide a limited mix of retail uses to meet the local needs of residents in a staged approach. This could include a supermarket offer (2,000 to 3,000m<sup>2</sup>) and a range of specialty shops. This would therefore equate to 2,000m<sup>2</sup> supermarket retail space by 2012 and 3,000m<sup>2</sup> by 2022, and 1,000m<sup>2</sup> of specialty retail floor space by 2012 and 2,000m<sup>2</sup> by 2022. The report concludes that *"this should be viewed as an opportunity at this stage, rather than a recommendation about an increase in floor space. Further analysis is required to confirm this opportunity."*

Council therefore obtained an economic expert to examine the above findings. It was found that the suggested retail floor space proposed could not be supported. It was concluded however that some retail provision can be supported by the residential population and that further economic assessment that also considers the impacts on all centres within the locality should be undertaken.

It should also be noted that any future retail component located within the BLC project should be limited to serving the local convenience needs of the residents only without impacting on the viability of the Bonnyrigg Town Centre, and should take into account Council's Retail Centres Policy.

Based on the economic advice obtained by Council, the suggested retail floor space outlined in the MacroPlan report should not be supported. Accordingly, it is recommended that further analysis is required to be undertaken prior to the construction of the Community Precinct. This can be appropriately conditioned.

## 5.21 PUBLIC OPEN SPACE

### 5.21.1 Proposed Parks and facilities

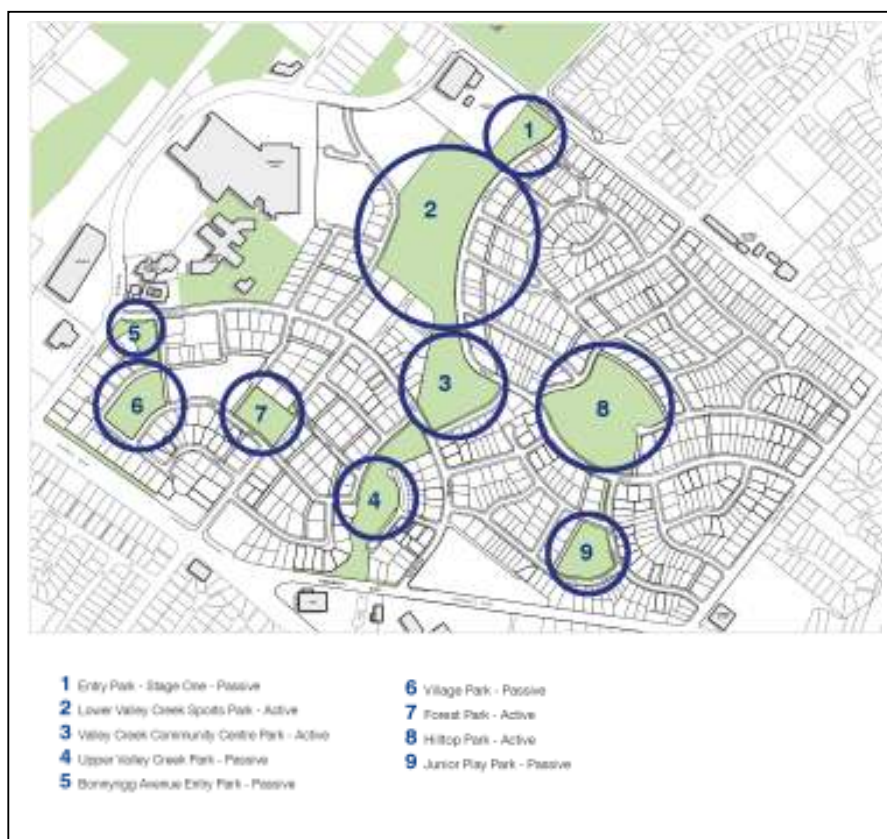
The Concept plan proposes significant reconfiguration and rationalisation of existing public open space areas to;

- better meet the needs of existing future residents with regard to the quantity and quality of open space areas, including the cross-section of passive and active recreation opportunities available within these areas
- improve urban design outcomes through the provision of open space, including a more integrated relationship with residential development associated with the proposal
- enhance the level of access to and activity in open space areas.
- promote opportunities for increased passive surveillance in new open space areas
- incorporate a range of landscape measures within open space and systems which support the principles of Water Sensitive Urban Design (WSUD)



In terms of 'rationalisation' of open space, this largely arises from the removal of a number of existing narrow laneways connecting open space at the rear of existing residential developments. Currently these areas are not entirely conducive for recreational purposes and in many cases, due to the lack of surveillance, generated concerns amongst the community in regard to crime and safety.

In general, the reconfiguration and rationalisation of open space also generates a more appropriate distribution of active and passive open space across the site as shown in the following figure.

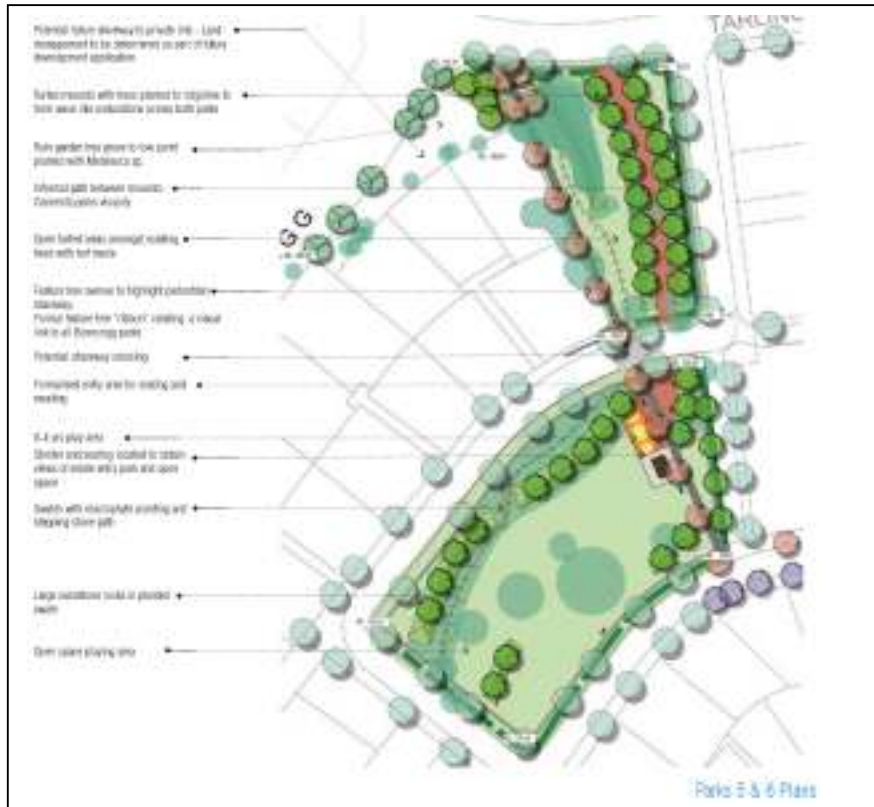


*Proposed new parks and open space system*

Under the proposal the change in provision of open space will be as follows:

- Current gross amount of land zoned 6(a) Existing and Proposed Recreation within the Estate = **12.8 hectares**
- Current net amount of land zoned 6(a), available for passive and active recreation purposes (i.e. excluding narrow access ways) = approximately **11.9 hectares**
- Proposed net amount of land to be allocated for passive and active recreation activities within the development = **11.5 hectares**

Examples of the treatments to create new active and passive recreation areas are shown below in the following figure:



Parks 5&6 Passive Parks (predominantly passive uses)



Park 8 (predominantly active uses)

Issues have been raised in relation to the quantity of open space and whether this will meet the needs of the expected population within the redeveloped estate. This has been discussed at length in section 5.19 of this report. Whilst there may be concern with the amount of open space proposed, it is also important to consider the improvements proposed to these areas including a more even distribution of parks across the estate, access to open space will be improved in that all open space areas will be within 400m walking distance from residences, and significant embellishment will be provided within each park. Notwithstanding this, and taking into account the reduced private open space areas proposed to be provided, it is recommended that strategies be developed that promotes healthy living and involves residents in the use of parks and recreational facilities.

The NSW Premier's Council for Active Living (PCAL) have expressed an interest in participating in ongoing monitoring and evaluation strategies for the BLC project. This will assist the proponent in meeting its obligations in addressing PCAL's Designing Places for Active Living Guidelines. It is recommended that this form a condition of consent.

In relation to the ecology of the site, whilst a portion of the existing ecology is safeguarded through retaining existing parks, it is noted that existing local ecology encompasses a connected tree canopy involving trees on private land which shall be potentially removed and replaced during the staged development of the estate. It is noted however that a Flora and fauna assessment has been undertaken and in this regard, an ecology staging plan should be provided that builds upon this plan. This can be appropriately conditioned.

#### **5.21.2 Public Open Space – Stage 1**

The Stage 1 public open space area comprises 3.9ha of green space running north-south through the estate from Edensor Road in the north to Cabramatta Road in the south (refer Stage 1 Landscape Plan).

Embellishment of the Stage 1 public open space area includes the retention of existing sporting facilities (including a full-size soccer field and a junior soccer field, half-basketball court and amenities building), provision of children's play equipment, the construction of a civic space and an integrated pedestrian and bicycle network, a formal feature tree avenue along new Bunker Parade and car parking also along new Bunker Parade.

The proposed 'Entry Park', located at the intersection of Edensor Road and new Bunker Parade provides a distinctive landscape entry statement and also serves an ecological function through the provision of bioretention raingardens to manage stormwater. The Stage 1 public open space area also includes a stormwater detention basin with approximately 8,000m<sup>3</sup> of stormwater detention storage.

Tree planting in Stage 1 includes street tree planting, cultural tree planting and native tree planting. The proposed canopy cover is calculated at 1.5ha canopy. This represents a percentage canopy cover for Stage 1 of 39%, which exceeds Council's minimum requirement of 30%.

Whilst the embellishment of the Stage 1 public open space area is considered to be satisfactory, it is recommended that detailed design plans of the detention system, the sports facilities and the proposed tree planting are provided prior to the issue of a Construction Certificate.

### **5.22 LANDSCAPING**

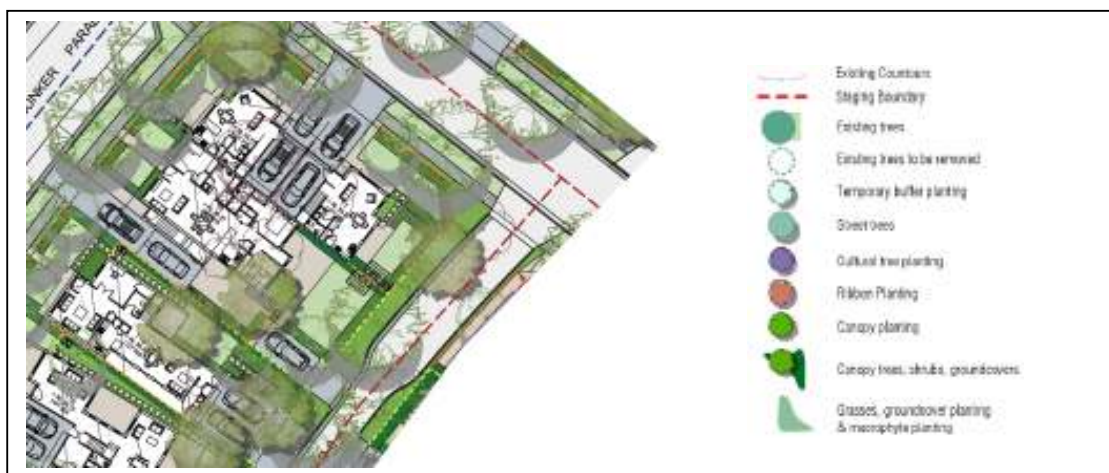
#### **5.22.1 Concept Plan**

The Flora and Fauna analysis for the site (**s.5.16**) highlights that the site was entirely cleared of original indigenous vegetation approximately 30-40 years ago. Notwithstanding, a range of objectives and principles (below) have been developed under the Concept Plan to incorporate landscaping measures that are representative of the original Cumberland Plain Woodland.

- 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
- To establish monitoring and maintenance initiatives that support establishing ecologies

### 5.22.2 Stage 1 - Private and Public Domains

Detailed concept landscape plans have been prepared for both public open space areas and private lots (below) within the development to support the above objectives. Conditions of consent require submission of more final information for the development in relation to the numbers and range of species to be planted in the private and public domains.



In view of the multi-staged programming (18 stages) and extended time period for the redevelopment of the estate, the proponent should provide a 'Landscape Design Audit Template' to ensure that at any time in the design life of the project, the degree of conformity of the design with the Principles that underpin the Design Guidelines can be measured. Furthermore, this template should include the application of the Premier's Council for Active Living Guidelines. This can be appropriately conditioned.

### 5.23 ABORIGINAL CULTURAL HERITAGE

A Heritage Impact Assessment Report was prepared for the proposal which reached the following conclusions in relation to potential Aboriginal Cultural Heritage on the Site:

*No evidence for past Aboriginal visitation or use of the Bonnyrigg Estate study area has been identified to date, namely:*

- *No registered midden deposits or flaked/ground stone artefact finds or scatters have been recorded in the locality.*

*None of the few indigenous trees that are present across the Estate (primarily in the reserves) display any evidence for cultural modification and are also assessed to be of insufficient age to possess Aboriginal scarification.*

*No specific areas of buried soil profiles that may retain Aboriginal archaeological potential have been highlighted through past consultation with the GLALC as documented in the 2005 HIS study prepared for the place.*

*It is further expected that any potential Aboriginal objects that may be impacted upon by future development works within the study area will likely to be encountered within highly disturbed recovery contexts.*



*Based on the conclusion that future works that may be proposed within the Bonnyrigg Estate study area will not impact upon any identified Aboriginal archaeological sites or objects, and that the assessed potential for undetected Aboriginal archaeological items to occur within the subject lands is extremely low given its highly developed nature, it appears that there are no obvious Aboriginal archaeological or cultural heritage constraints at this time to the proposed future uses of the land proceeding as intended.*

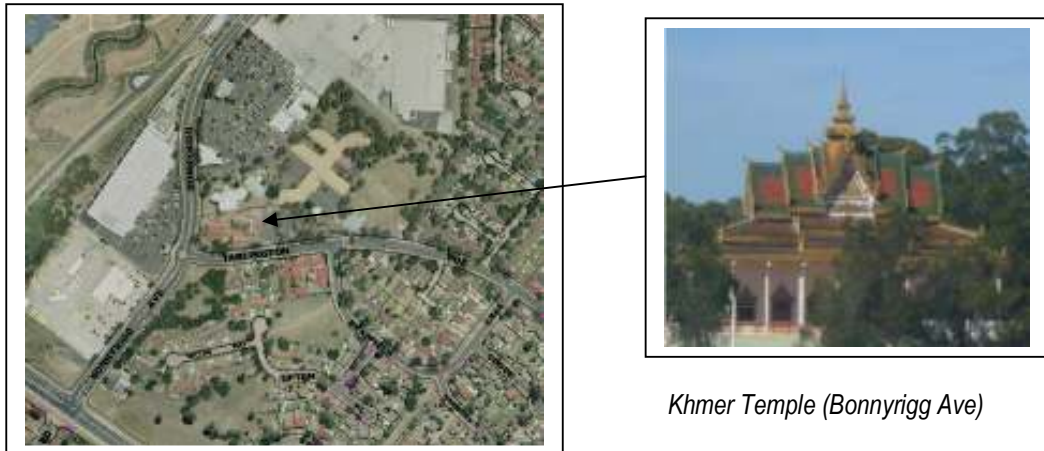
No information or evidence relating to Aboriginal Cultural Heritage on the site was provided by Fairfield City Council or State Government Agencies during public exhibition of the proposal to suggest that the above conclusions are incorrect.

It is noted that during community consultation sessions associated with the proposal, that feedback was provided by sections of the Aboriginal community living on the Estate regarding current informal meeting places within the development site, particularly in existing parks.

The nature of use of these areas has been factored into the overall design and layout of the proposal.

## 5.24 NON ABORIGINAL CULTURAL HERITAGE

The Khmer Temple on Bonnyrigg Avenue (below) is the only site within the development site listed as an item of local heritage significance under Schedule 2 of Fairfield LEP 94.



*Khmer Temple (Bonnyrigg Ave)*

In addition there are a number of sites listed as heritage items in proximity to the development site as follows;

- 2-4 Bibbys Place      Temple
- 10 Bibbys Place      Temple
- 11 Smithfield Road      Temple

The proposed development is accompanied by a heritage impact assessment (HIA) which contends that the above sites are not impacted by the development due to their distance from the proposal development site

In relation to the Khmer temple the HIA provides the following key observations:

### *Views*

*The Temple is a high structure and is visible from many vantage points especially from the north and west where it is seen against the backdrop of trees along Tarlington Parade. The built density of the Estate will be as is along this road in the vicinity of the Temple and the views from the north and west will not be affected by the development.*

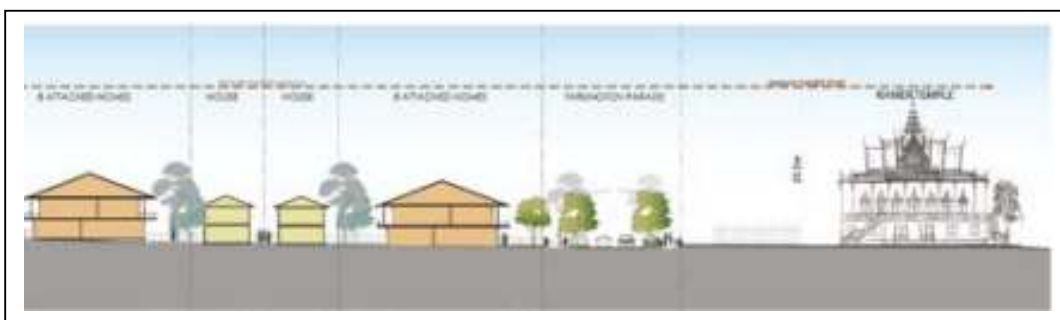
*From the estate, the Temple can be seen above the roofs of the houses in the Estate and the Estate Roads. The views from the estate could not be considered important as there is no relationship*

*between the buildings. Views to and from development will be similar to the existing though new view will be created along the new road opposite the temple.*

#### *Area Character*

*The character of the area is quite mixed with residential, warehousing and retail development set in a fairly open, suburban landscape. The Temple stands out in this landscape due to its scale and architectural style. The proposed redevelopment will replace housing with housing and the character of the area will not change in this regard and the character of the area around the Temple will remain as is.*

Notwithstanding the above, following feedback from community consultation, the proponents have included controls in the Concept Plan (below) aimed at maintaining the visual profile of the Khmer Temple and existing views from future residential development within the BLC Project.



*Extract from Masterplan*

The proposed provisions of the Concept Plan outlined in the Masterplan document will help mitigate against visual impacts of the development on this item of local heritage significance.

There are no other items listed under the NSW Heritage Act within or in close proximity of the site.

## **5.25 ACOUSTIC AMENITY**

As part of their Preferred Project Report, the proponents submitted an Environmental Noise Assessment, which undertook analysis of the traffic noise levels around the perimeter of the site and other identified potential noise sources. The report noted that the main source of traffic noise would be from Elizabeth Drive, due to the significantly higher volume of vehicle movements and the higher representation of large rigid vehicles.

However, Edensor Road and Humphries Road carried only low to medium volumes of traffic and were less impacted than the land adjoining Elizabeth Drive and Cabramatta Road, which has medium to high traffic volumes.

Table 5 of the Environmental Noise Assessment lists the glazing requirements to bedrooms and living areas to ameliorate noise and meet the noise objectives based on the proximity of the dwelling to the noise source, recommended for residential development within the BLC project.

The acoustic report also recommends that a 3m acoustic wall may be required along the Elizabeth Drive boundary and suggests this as an option. The proponent has not indicated if this option will be undertaken at this stage. Given that the acoustic wall along Elizabeth Drive will not be required until stages 17 and 18 of the redevelopment, it is suggested that this issue can be considered as part of the assessment of these stages. This can be appropriately conditioned as part of the concept plan application.

Accordingly, the assessment concludes that each of the proposed dwellings in Stage 1 will satisfy the internal noise objectives if window treatment is provided to the bedrooms that face the street. It is noted that while windows are to be acoustically treated, they can be opened to provide natural ventilation.

Council's Environmental officers concurred with the findings of the report and indicated that the dwellings should comply with environmental noise guidelines if the recommended acoustic treatments were implemented.

## 5.26 CONTAMINATION AND REMEDIATION

An Environmental Site Investigation was prepared by JBS Environmental Pty Ltd to investigate potential contamination issues within the estate. The scope of the work included a detailed site inspection, desk top review of site geology, hydrogeology, acid sulphate soils map, and salinity, and a review of all previous investigation reports, aerial photographs, land title information, regulatory notices and information relating to the historic use of the site.

It was revealed that imported fill material was evident on the site within Bunker Reserve, Tarlington Reserve and located within boundaries of former creek beds.

A previous environmental report (prepared by Parsons Brinckerhoff in May 2005) took soil from 5 boreholes and found concentrations of TPH/BTEX however were below the acceptable criteria. Other boreholes revealed evidence of fill material. In this regard, the report found no significant potential for contamination resulting from current or past uses.

On this basis the JBS Environmental concludes that due to the presence of fill located within Tarlington and Bunker Reserves, with no chemical analysis undertaken including minimal sampling and analysis conducted throughout the site, the above conclusions are premature. As such, the report makes the following recommendation;

*"In order to draw conclusions regarding the suitability of the site for the proposed sensitive land uses, it is recommended that intrusive soil and quadrant sampling be conducted, focusing on the areas of environmental concern identified as part of the preliminary environmental site investigation".*

A preliminary environmental site investigation was also prepared by JBS Environmental for the stage 1 project application. It was concluded that fill materials were identified across the Stage 1 site. Results indicated that fill materials were impacted with asbestos cement fragments. Indiscriminately dumped materials and the demolition of former structures were found to be a likely contributor to surface asbestos materials. In order for the site to be considered suitable for the proposed residential development, remediation and validation of the identified asbestos contamination is required.

Council's Environmental officers have assessed the Preliminary Environmental Site Assessment Report and found it to be satisfactory. Council's officers recommend that a Stage 3 Remedial Action Plan (RAP) be prepared in accordance with the NSW EPA Contaminated Sites Guidelines and, that upon completion of the remedial works, a Stage 4 Validation Report be prepared and submitted to Council for approval, prior to the issue of a Construction Certificate. These conditions are recommended to form part of the approval.

In relation to the remaining stages of development, it is recommended that a detailed contamination report be prepared for each stage and considered at the time of each stage to be developed. It is recommended that a condition be imposed as part of the concept plan application.

## 5.27 PUBLIC INFRASTRUCTURE AND SERVICES

Specific details in relation to provision of public infrastructure and services are detailed below. It is important to note that the provision of infrastructure and services is supported by a Voluntary Planning Agreement (VPA) that has been prepared for the proposal. In addition, the VPA is also accompanied by an Infrastructure and Services Delivery Plan (ISDP) which sets out detailed information in relation to the description, technical specifications and anticipated timing for the delivery of infrastructure and services (see **s.5.28** below).

As discussed in the following sections, the proponents have already had detailed discussions with a range of service providers in relation to these services and the SoC and conditions of approval would require the proponents to seek the necessary approvals or licences for connection and augmentation of these services required for the development.

### 5.27.1 Drainage Infrastructure

While some of the existing stormwater drainage infrastructure is to be retained, the water cycle management system will include an upgrade of the major and minor systems as follows;

- The construction of a single, stormwater detention facility for each of the three separate catchments - namely central, eastern and western. The eastern catchment OSD works are to be off-site. The location and extent of which will be negotiated and agreed upon with Council with the Stage 3 Development Application. These basins will provide approximately 9,300m<sup>3</sup> of combined stormwater detention storage;
- In addition to this stormwater detention, it is also proposed to create a series of water quality control facilities, for treatment of runoff prior to discharge from the site. These facilities shall include wetlands, rain gardens, bio-retention swales and sinks. The area of these facilities is approximately 5,300m<sup>2</sup>;
- The construction of new minor road stormwater systems will total approximately 3,700m of pipe and associated pits; and
- Sub-soil drainage provided within the new roads and proposed tree wells will total approximately 12,700m of pipe.

Stormwater pipe infrastructure summary:

- Proposed – 3,700m
- Retained – 6,700m

### 5.27.2 Road Network

To achieve the proposed road layout, existing roads will be retained and new roads will require full construction (see figure below). The road upgrading works will include provisions for the replacement or improvement of pavements, kerbs and gutter, traffic control devices and intersection upgrades (both internal and external).

The breakdown of new and upgraded infrastructure consists of;

- Upgraded and re-sealed roads totalling 4,500m in length and 74,000m<sup>2</sup> of re-sealed pavement;
- 8,200m in length and 105,000m<sup>2</sup> of newly constructed pavement will be constructed as new roads; and
- Additionally, 27,400m<sup>2</sup> of new or replaced street footpath, including shared cycle/pedestrian links will be provided.
- Road infrastructure summary:
  - Proposed – 8,200m
  - Retained – 4,500m





### 5.27.3 Potable Water

The existing potable water supply within the development area will be extended and upgraded where necessary. The majority of existing pipe will be retained with all new pipe work connecting into the existing system, thus providing approximately 7,100m of new potable water mains, with approximately 3,700m to be removed.

Through discussions with Sydney Water it has been ascertained that any net increase in water consumption will have an adverse impact on supply to neighbouring areas. Sydney Water has indicated that a pumping station and external pipeline may be required to service the development. The precise nature and location of the amplification will need to be determined during the detailed design stage, however it is noted that the use of recycled water may allow this scenario to be avoided.

Potable water infrastructure summary:

- Proposed – 7,100m
- Retained – 6,900m
- Demolished – 3,700m

### 5.27.4 Recycled Water

As previously mentioned it is intended to supply recycled water to the development. A recycled water main will be laid throughout the entire development, greatly reducing the potable water demand and assisting in satisfying the BASIX requirements for potable water demand reductions. The recycled main will be laid alongside the potable water main where possible in new roads and on opposing sides of the road for existing roads to minimise existing service disruption. The estimated length of recycled water main is 12,200m.

Discussions have taken place with Sydney Water and an alternative service provider who has indicated a desire to provide a recycled water supply to the development. Provision of supply could be made at the corner of Cabramatta Road and Humphries Road. This would then be connected to the purpose built recycled water reticulation within the development.

It is noted that the proponents have entered into a deed of agreement with the Dept of Planning to facilitate the provision of recycled water on the site and are currently have discussions with commercial providers. (s.6.3.9)

Recycle water infrastructure summary:

- Proposed – 12,200m
- Retained – 0m
- Demolished – 0m

### 5.27.5 Sewer

The existing sewer within the development area will be retained if possible or extended where necessary. In addition to the sewer reticulation works, a number of sewer main upgrades, both on and off site, will be constructed due to the increase in density of the Bonnyrigg renewal. The new sewer reticulation and carrier mains will be connected to the existing Sydney Water system, entailing approximately 8,000m of new sewer main and associated manholes.

Sydney Water has carried out detailed analysis of the system. The result of this analysis is that no augmentation or upgrade of downstream infrastructure is required.

Sewer infrastructure summary:

- Proposed – 8,000m
- Retained – 6,000m
- Demolished – 6,900m

### 5.27.6 Telecommunications

While some of the existing telecommunications infrastructure can be retained as part of the renewal process, a significant portion of the site will require new services. These new works shall be undertaken as part of the infrastructure renewal and will be contained within a shared trench arrangement with electrical, broadband and gas reticulation. The additional telecommunications conduit and cabling will total approximately 5,100m.

Existing telecom ducts and cabling will be retained where possible, but will need to be removed where they do not follow proposed road alignments. Telstra have been contacted and the Access Planning division has indicated that Telstra have no future upgrades planned for the area and that no servicing issues are apparent. In addition to the standard telecommunications cabling it is proposed to reticulate a broadband network throughout the estate for information technology purposes. It is estimated that the new cabling will total approximately 12,700m.

Future long term and additional provision of Telstra and Optus services for the area will need to be reviewed with the service providers.

Telecommunication infrastructure summary:

- Proposed – 5,100m
- Retained – 11,000m
- Demolished – 7,500m

Broadband infrastructure summary:

- Proposed – 12,700m
- Retained – 0m
- Demolished – 0m

### 5.27.7 Gas

Presently, only the central private properties and public housing to the north west of the site (situated between the playing fields and the shopping centre) have the provision of gas reticulation. The gas service will be installed as part of the shared trenching of services for recycled water and broadband through the remainder of the estate.

Gas supply to the future dwellings will be supplied from the retained mains and extended services as part of the works. The existing mains are of various sizes with the supply feed main being located in Edensor Road

The gas supplier, Alinta has been consulted throughout the design process. Alinta have indicated that they would supply gas to the entire development area in a shared trench arrangement at no extra cost to the proponent. Alinta have also advised us that the existing network has the capacity to serve the development. It is anticipated that approximately 12,200m of new gas piping will need to be installed to supply the entire development proposal.

Gas infrastructure summary:

- Proposed – 12,200m
- Retained – 3,100m
- Demolished – 2,400m

### 5.27.8 Electrical

Similar to the telecommunications services, as much of the existing electrical services as possible will be retained during the renewal process. Any new electrical reticulation will be provided in a shared trenching arrangement within proposed roads and will connect to the existing electrical supply system. The new reticulation will consist of both low and 11 kV high voltage and associated pad-mount substations and switching gear. Due to the Integral Energy's normal augmentation program and the reduction in electrical usage on a per dwelling basis there are no additional off-estate major works required solely servicing the renewal area.

New electrical reticulations will approximate 5,900m of conduit and cabling;

- The number of new light poles will be approximately 290; and
- Pad mount substations provided will be approximately 21.

The electricity supply across the whole of Bonnyrigg will need to be increased. Additional substations will be required to service the proposal. High voltage and Low voltage cabling will need to be installed across all future stages.

Under preparation of the EA for the proposal, Integral Energy advised the proponents that;

- plans are in place to augment their zone substation in Monash Place and to construct a new zone substation at Abbotsbury, these upgrade measures and the connection between these sites with high voltage transmission lines will ensure that the entire renewal development can be serviced adequately throughout the staged process. Until this infrastructure is constructed the current electrical supply can support 1,400 dwellings.
- Integral Energy advised that the upgrades would occur within the next 3 years. As the expected development program will not create more than 1,400 dwellings until 2013, it is expected that Integral Energy's current program is suitable. However, further discussion with Integral Energy should take place leading up to, and during the detailed design stage of the project.

Total cable service infrastructure:

- Proposed – 5,900m
- Retained – 9,000m
- Demolished – 7,200m

High Voltage substation infrastructure:

- Proposed – 900m
- Retained – 0m

Total pad-mount substation infrastructure:

- Proposed – 21m
- Retained – 7m
- Demolished – 6m

As referred to under s.5.26, Conditions are included to ensure appropriate approvals are sought from all service providers referred to above.

### 5.27.9 Community Facilities

A proposed community precinct (below) is proposed within Park 3 which incorporates a range of facilities and services including a new community centre.



The community centre will be a purpose designed building for a range of community uses including provision of halls, meeting rooms, health clinic and out reach services. The spaces will be designed to be flexible and adaptable for a range of community uses over time.

The anticipated range of general needs and activities identified for the centre as a result of the social impact assessment and community needs analysis carried out for the development includes: support activities with disabilities, children, seniors, general community purposes, Guides and training. Meeting rooms will be provided for share uses as well as counselling.

A baby health/clinic is also provided along with a commercial kitchen and small business/enterprise development resource room. Offices are also provided for use by services for NGO's providing services to the local community. These include 5 separate office spaces of various sizes for flexible uses. The total minimum area for this facility is 621m<sup>2</sup>.

FCC will own and manage the centre in cooperation with Bonnyrigg Partnerships following the dedication of the land to Council associated with the community centre, community gardens and cartilage. This precinct will also include a convenience store and commercial offices of Bonnyrigg Partnership (see).

Arrangements for establishment and dedication of the community centre and other public infrastructure and services will be coordinated through the Voluntary Planning Agreement (VPA) which has been prepared for the proposal is covered under the following sections of this report.

## 5.28 CONSTRUCTION MANAGMENT

An Environmental and Construction Management Plan (ECMP) has been prepared for both the Concept Plan and Stage 1 construction. These plans set out recommendations in relation to a range of environmental management measures relevant to construction activities associated with the Project in relation to:

- Environmental Objectives
- Phasing requirements (pre-construction, construction and post construction)
- Works method Statement
- Access, egress and compound management
- Civil structures
- Demolition and waste management
- Dust management
- Asbestos management
- Electrical systems
- Emergency Response
- Excavation Works
- Flood mitigation – contingency
- Flora tree management
- Sewer and water management plan
- Hazardous material management
- Noise management
- Occupational health and safety
- Odour control
- Stormwater energy dissipations
- Saline soils
- Soil and water management
- Soil contamination
- Topsoil management
- Traffic management
- Waste management plan
- Water quality management

For each of the above activities, a range of principles, reference to other investigations carried out for the proposal or basic requirements are outlined in relation to the following generic topics:

*Environmental issues:*

Under this topic the main issue(s) relevant to the area of activity or source for potential concern is identified. E.g: for flood mitigation the main source for environmental concern are identified as:

- Pollution of downstream water bodies due to sedimentation
- Delays to works due to inundation
- Access across watercourses; and
- Damage to landscape works

*Compliance and Best Practice Guidelines:*

Under this topic relevant areas of legislation and compliance requirements are listed. For flood mitigation this includes:

- Environmental legislation regarding pollution
- Best management practices; and
- Industry standards

*Environmental Goals:*

This section outlines the principles aims and objectives in relation to the relevant area of environmental management. In the case of flood mitigation this includes the following aims;

- control waters up to the 2-year Annual Recurrence Interval (ARI) storm event
- reduce the potential of erosion due storm events from upstream flows
- ensure that the access across the central swale is re-established as soon as possible
- during or after storm events; and
- Minimise site disturbance due to inundation from upstream flows.

*Work Instructions:*

Under this topic recommendations are provided on measures to mitigate risks or minimise the scope of potential environmental impacts. For flood mitigation this includes:

- providing controlled access points across the central reserve;
- establishing and maintaining growth of the sterile urban and native seed mix contained within the hydro mulch;
- the effectiveness of the stabilised material and access to be checked daily; and
- maintenance of all erosion control measures adjacent to newly landscaped and mulched areas

*Responsibility:*

This sections details the person(s) responsible for implementing management measures identified for the area of environmental risk. In the majority of instances this relates to individual contractors carrying out particular work or superintendent overseeing the construction activities, who "may order all works to cease until such time as any particular control has been installed or restored"

The above range of issues highlights both the complexity and extent of environmental management measures required for the proposal. In general, the list activities and scope of risk management measures identified in relation to environmental and construction issues is considered reasonable.

Accordingly this plan is considered suitable as the basis for implementation of an environmental construction management plan as required by conditions of approval.

## 5.29 CUMULATIVE IMPACTS

Potential cumulative impacts associated with the proposal encompass a broad range of issues and perspectives dealt with extensively under this report in relation to; social, environmental, economic and infrastructure planning issues.

A range of measures are proposed which would help mitigate against potential cumulative impacts of the proposal as detailed in the SoC, proposed VPA and conditions of consent.

The proposal would help facilitate urban renewal of a public housing estate, where open space areas are not conducive for recreation uses for the broader community or the area and where much of the current public housing stock is in a state of decline.

The proposal also proposes to implement a number of building and infrastructure measures which support the principles of sustainable development and aimed at reducing energy and water use under the development. In this regard the proposal will generate a range of positive cumulative benefits for the community which far outweigh potential negative cumulative impacts.

## 5.30 VOLUNTARY PLANNING AGREEMENT & DEVELOPER CONTRIBUTIONS

A Voluntary Planning Agreement (VPA) has been prepared for the Concept Plan under s.93F of the Environmental Planning and Assessment Act 1979 (The Act) covering the provision of a range of infrastructure and services required to facilitate the renewal of the Bonnyrigg Estate.

A planning agreement is a voluntary agreement or other arrangement between a planning authority and a person who:

- (a) has sought a change to an environmental planning instrument, or
- (b) has made, or proposes to make, a development application, or
- (c) has entered into an agreement with, or is otherwise associated with, a person to whom paragraph (a) or (b) applies.

under which the developer agrees to dedicate land free of cost, pay a monetary contribution, or provide any other material public benefit, or any combination of these, to be used for or applied towards a public purpose.

The need for a VPA to accompany the Bonnyrigg Living Communities Project was outlined in the Fairfield City Council Bonnyrigg Living Communities Project – Supplementary Advice on Section 94 Issues (February 2006), which was provided to the consortiums bidding for the rights to redevelop the Estate.

The proponents have offered to enter into the VPA with Fairfield City Council, which has also provided in principle agreement to enter into the VPA, subject to public exhibition and final consideration of the VPA by Council.

The VPA acknowledges that the developer will provide public benefits instead of any contributions that may have been required under sections 94, 94A or 94EF of The Act, that have applied to the developments the subject of the relevant development applications

The objectives, nature and effect of the VPA acknowledges that public benefits to be provided will include:

- Design and construction of new roads and upgrade of existing roads;
- Design, construction and embellishment of public open space;
- Design and construction of a water management system that includes management of stormwater quantity and improvement in its quality;
- Design and construct a new community facility/ building within the estate;

- Provide a range of community services within Bonnyrigg, including payment of monetary contributions for Council to provide these services; and
- Provide Public Art.

As part of the VPA, the Bonnyrigg Public Infrastructure and Services Delivery Plan has also been developed to set out the detail of the design, operation, timing, maintenance and value of the public infrastructure components provided in the Bonnyrigg Living Communities Project.

### **5.30.1 On-going management and maintenance of Infrastructure**

The Voluntary Planning Agreement for the proposal, outlines arrangements made in relation to the management and maintenance of all public infrastructure associated with the proposal.

The works undertaken as part of the renewal process will be under the developer's care and control, including all maintenance and liability, until the infrastructure and facilities are dedicated to Council. Following the dedication Council would maintain these in the same manner as would apply to any infrastructure or facilities owned by Council.

However, the defects period would enable Council to ensure that the works were not defective and provide Council with the opportunity and rights to take moneys (call-in bonds) or undertake works (step-in rights) to ensure that the works are dedicated only when an appropriate standard of construction has been achieved.

Defects securities are supplied by the Developer to Council in accordance with the table in section 5.3 of this plan. Each defects security should be released at the end of the defect period.

While this should satisfy the provisions of the defects period the parties agree that there needs to be security held by Council to protect against damages to infrastructure due to the dwelling construction. Another security shall be provided for this purpose. This additional security will be held for the duration of the project, (ie final occupancy of the final dwelling) to cover possible damage to infrastructure items.

The total security to be held is based upon the entire kerb length, (25400m), averaged over 18 stages, (1411m), with a multiplier of 33% for the single developer approach on the estate and multiplied by a rate of \$220/m, totalling \$102,000. This bond shall be in lieu of kerb and gutter damages bonds ordinarily required to be provided by the developer during dwelling construction.

Regarding the potential ongoing maintenance and future embellishment of the infrastructure and facilities on the estate, the developer proposes that following dedication of these, the maintenance will be Council's responsibility (defects excluded).

However, the developer and Bonnyrigg Management, would seek to undertake additional maintenance and services on Council land. This could include, maintenance of facilities, replacement or upgrading of facilities, materials, landscaping, public art, furniture and other embellishments. This will also relate to other activities on Council land, such as, Site Nursery Management, Management of Clean-Up Australia Day (and other community based activities) and Land Care (Westpac funded) activities and the like.

### **5.30.2 Infrastructure and Services Provision Stage 1**

Stage 1 of the Project provides for the initial establishment of a range of infrastructure and services required under the proposal (including later stages) as follows;

- Upgrade of collector roads within the Bonnyrigg Estate.
- Works for the provision of roads adjacent to parks.
- Provision of cycleways within Bonnyrigg Estate and connections to established cycleways outside the Bonnyrigg Estate.
- Installation of public art.

- Construction of detention basins.
- Provision of gross pollutant traps.
- Works for the construction and embellishment of the 'Valley Park'.
- Construction and embellishment of works along creek lines to contribute to site water management to improve drainage, planting, riparian protection and pedestrian crossings.
- Installation of water quality measures.
- Contribution of funding for youth and children services.
- Contribution of funding for upgrade of Bonnyrigg library.
- Land dedication associated with the provision of facilities

### 5.31 COMMENTS ON DRAFT STATEMENT OF COMMITMENTS

The project is also supported by a draft Statement of Commitments (SoC - **APPENDIX E**) prepared by the proponent in accordance with s.75J of The Act.

The SoC prepared for the proposal outlines the following;

- General terms that the project will adhere to
- Contributions made by the proponent in accordance with the Voluntary Planning Agreement
- Measures to mitigate for any environmental impacts
- Measures to monitor the environmental performance of the project.
- Achieving minimal impact in the environment and a positive environmentally sustainable outcome

In relation to the VPA, the SoC reiterates or provides confirmation that under any approval granted to the proposal by the Minister, the proponents will enter into a VPA with Fairfield City Council for the purposes of providing either dedicating land free of cost, payment of a monetary contribution, or provision of any other material public benefit, or any combination of them, to be used for or applied towards a public purpose.

In addition to the above, appropriate conditions of consent have been prepared which supplement the proponents SoC.

### 5.32 PUBLIC INTEREST

Various sections of this report highlight the potential and need for the development in serving the public interest for existing residents and surrounding community.

These are summarised in the Environmental Assessment Report prepared for the proposal in accordance with the Director General's Environmental Assessment Requirements and are outlined below:

- *Replacement of ageing public housing stock and its replacement with modern, well-designed homes will enable residents to remain living in Bonnyrigg, will enhance the appearance of the area and will reduce ongoing maintenance costs.*
- *The reduced concentration of public housing through the introduction of privately owned dwellings, combined with the implementation of CPTED principles, will address existing safety and security issues and perception of the existing estate.*
- *Incorporation of ESD principles into the design, including the retention and upgrade of existing services and infrastructure, introduction of water sensitive urban design measures to treat stormwater, appropriate siting and design of new dwellings, selection of appropriate building materials and a range of other environmental measures.*
- *The voluntary planning agreement lodged with the Concept Plan proposes to make a significant investment in public facilities to benefit existing and future residents and the local community.*



*These benefits include:*

- *Upgrading and enhancement of external roads and intersections.*
- *Design and construction of collector road upgrades.*
- *Design and construction of cycleways and pedestrian paths.*
- *Provision of bus shelters.*
- *Design, construction and embellishment of local open space.*
- *Design and construction of water management facilities and works.*
- *Design and construction of a new community centre building on the site.*
- *Contribution to local art facilities.*
- *Contribution to the enhancement of the Bonnyrigg Youth Centre.*
- *Contribution to the enhancement of the Bonnyrigg Library.*
- *Provision of computer equipment (hardware) for community use.*

It is noted that extensive community and stakeholder consultation has been undertaken during various stages of the proposal including the bid process, design development phase and the preparation of the Part 3A application.

This later process also included preparation of a Social Impact Assessment and Social Needs Analysis as are discussed under **s.5.18** of this report.

In this regard, the Concept Plan and Stage 1 Project Application can be viewed as a product of this extensive consultation process, with the feedback from this consultation resulting in amendments to the design so that the proposed development responds to the expressed desires and demands of the existing and future residents and other important members of the local community.

Assessment of the project included an extended public exhibition period from the 19 December 2007 to 15 February 2008, resulting in a range of submissions (see **s.4.1**) from the community and public authorities.

The proponents subsequently made amendments to the proposal or provided additional clarification under the Preferred Project Report on how issues in raised (including those relating to the public interest) in submissions have been addressed

## 6 CONSULTATION AND ISSUES RAISED

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### 6.1 PUBLIC EXHIBITION DETAILS

The major project application was exhibited from 19 December 2007 for 58 days and was published in the Sydney Morning Herald and Fairfield Advance. The EA was made available to the public at Council's Administration building in Wakeley, Bonnyrigg Library, and at the Department of Planning's Information Centre.

A Preferred Project Report was lodged on 5 June 2008 and as the changes to the nature of the project were not significant, it was not re-exhibited but was placed on Council's and the Department's website from 18 June 2008 onwards.

### 6.2 TOTAL SUBMISSIONS RECEIVED

The Council received a total of 59 submissions comprising 50 submissions in response to the public and 9 submissions from public authorities being Roads and Traffic Authority, Ministry of Transport, Department of Housing, South Western Area Health Service, NSW ambulance, NSW Fire Service, Sydney Water, Integral Energy, and Fairfield City Council.

The 50 submissions from the public included 49 letters of objection from residents within the site and its surrounds, and 1 submission in support. Of the public authority submissions, 3 from 9 raised objections and/or issues and 6 from 9 did not raise any objection, subject to various conditions.

A summary of the neighbour notification submissions can be found in **Appendix F** and the public authority submissions are discussed below in Section 6.3 of this report. The proponent responded to the submissions on 5 June 2008 also contained in **Appendix F**.

### 6.3 SUBMISSIONS FROM PUBLIC AUTHORITIES / COUNCIL

The following submissions were received from public authorities:

#### 6.3.1 Fairfield City Council

#### 6.3.2 The key issues raised by Fairfield City Council were as follows:

- Infrastructure: clarification sought of graffiti protection measures and ongoing maintenance of noise walls, provide floodlighting in sports fields only, not in parks. Grey water should only be use on sports grounds, further information required on technical detail and specifications of new infrastructure.

[comment – these issues are now covered under the Voluntary Planning Agreement that has been negotiated between the proponent and Fairfield City Council]

- Social: clusters of social housing should be avoided and to be indistinguishable from private dwellings, consider location for elderly housing close to plaza and public transport, further information required about design standards and usage of community centre which has an inadequate design and fit out. Facility needs to be able to accommodate; guides hall, various welfare groups and service providers currently located on the estate. Better integration, planning and resourcing required under the proposal for; children's services, youth services, library services, public art. Number of plans cited in proposal and not provided (affordable housing strategy, community renewal services plan, rehousing strategy.

[comment – issues relating to the above are discussed under **s.5.19** and have been addressed under preparation of the VPA, see also the proponents response to submissions **APPENDIX F**]

- Economic: More justification required to support establishment of retail services in neighbourhood precinct, employment and training strategy should be provided, provide a study/strategy to support local business growth and spending.

[comment – issues relating to the above are addressed under **s.5.20** and through conditions of consent]

- Land Use Planning: Density should be focused within 400m of Bus T-Way to create a more walkable distance to public transport to be consistent with the Sydney Metropolitan Strategy. Lack of consistency with FCC existing DCP standards/controls. Proposed housing types (particularly in Stage 1) have limited solar access, cross ventilation, storage. Narrow laneways restrict parking and manoeuvrability, poor access, CPTED, illegal parking and congestion concerns. Inadequate provision of on-site parking.

[comment – The submission from Council was lodged prior to the issuing of the draft West Central Sub Regional Strategy, **s. 4.8.4**, provides further discussion on how the proposal achieves consistency with the draft Regional Strategy. Under the preferred project for the proposal, modifications have been made to buildings in Stage 1 to address solar access, ventilation and storage concerns (see **s.5.9**). Issues relating to consistency with other local controls are addressed under **s.4.8**, and **Appendix C**]

- Transport: No commitment for provision of bus services, no guarantee that mode shift to public transport will be achieved, junctions should be upgraded to support bus priority use.

[comment – issues relating to the above are addressed under **s.5.18, 4.8.4**. It is noted that the proposal includes provision for a bus route though the site, including new bus shelters. The development also provides for enhanced movement through the site for pedestrians and bicycles]

- Environment: further clarification required on how energy consumption will be achieved, access to recycled water not confirmed to meet BASIX requirements. Each site should have stand alone Grey water facility. More details required on stormwater re-use potential, including rainwater tanks. DECC guidelines for water quality need to be met. Risk maps for flooding need to be provided. Clarification required on any sewer discharges. Reduce level of hardstand area.

[comment – issues relating to the above are addressed under **s.4.5, 5.11 & 5.12**]

- Voluntary Planning Agreement: legal documents need to be supplied, delivery process required covering timing, design, costing and maintenance of infrastructure.

[comment – at the time of the Council submission, detailed information (including, legal documents and an Infrastructure and Services Delivery Plan), were not available. There has now been extensive negotiations between the proponents and Council which has led to the development of these documents as outlined under **s.5.30**]

As part of the Council submission, two supporting documents were also produced and made available to the applicants. This included;

- An appendix outlining how issues raised in the Council submission relate to various Broad Aims and related issues in the Fairfield City Plan (see **s.4.8.3** for further background)
- *Peer Review of Urban Design Concepts and Guidelines*, covering the concept plan and stage application, prepared by HERE Architects

[comment – the issues raised in the above documents have been addressed in the Preferred Project Report submitted for the proposal see]

### 6.3.3 Roads and Traffic Authority

Initial issues raised by the RTA to the EAR included:

- Lack of evidence and strategy to suggest the projected increase in public transport can be achieved
- The TMAP does not include any new road providing access to the local shopping centre and other facilities. There should be specific proposals which link the transport network to the Bus T-Way
- There should be some strategy to maintain and encourage walking and cycling
- There is some doubt on whether suggested intersection improvements based on SIDRA analyses of their current operational data and projected traffic flow are justified. Some proposed intersection improvements are not practical and costs underestimated.

[comment - as part of the Preferred Project Report (which included a response to the above issues **APPENDIX F**) a revised TMAP was submitted and referred to the RTA. Further meetings and discussions also took place between the RTA (including the Sydney Regional Development Advisory Committee) and the proponents to resolve issues relating to the proposal]

The RTA advised as follows in relation to the amended TMAP;

*"In respect of the cost of apportionment for improvements to the intersections of Edensor Rd/Smithfield Rd and Cabramatta Rd/Humphries Rd, it should be noted that the RTA has no plans for upgrading of these intersections. Funds for this type of facility are limited and allocated on a state wide priority basis to sites which have the greatest need.*

In addition, the RTA advised that a range of data remains outstanding and recommended that the following matters be addressed prior to the issue of any development consent;

- The RTA requires submission of a revised Paramics model incorporating amended parameters as agreed by the RTA.
- The submission of a revised SIDRA analysis for the intersections impacted by the proposed development using an average growth rate of 1.25%
- On the submission and acceptance of the revised Paramics model and SIDRA analysis, the RTA will assess the suitability of the proposed intersection improvements
- The submission of a demolition and traffic management plan detailing vehicle construction routes, number of trucks, hours of operation, access arrangements and traffic control to be submitted to Council, for approval, prior to the issue of a construction certificate

[comment: Further information regarding the TMAP is included in **s.5.18** of this report and the outstanding issues raised by the RTA are covered under conditions of approval]

### 6.3.4 Ministry of Transport

Comments from the MOT in relation to initial EAR and TMAP were:

- TMAP does not address the directions of the State Plan, Urban Transport or review the objectives and requirements of the draft Interim TMAP Guidelines.
- Statement that the TMAP universally aims to achieve 10% modal shift away from private vehicles is not supported by draft TMAP Guidelines. More detailed modelling required
- Mode shift based on broad assumptions and detailed modelling, having regard to emerging socio-economic profiles.
- Statements in TMAP pre-empt the outcomes of Integrated Network Planning for bus contract region 3
- Proposed secondary bus route along Tarlington Pde may have significant cost implications, which are not factored into TMAP.
- TMAP does not address casual link between car parking supply and mode shift share.

- Report should address the Ministries' Service Planning Guidelines and include a review of key approaches relevant to Bonnyrigg. Should also identify organisations which are responsible for achieving nominated package of transport measures.
- The intersection modelling does not address potential mode share benefits to bus priority measures, together with needs of pedestrians and cyclists.

Under the Preferred Project Report, an amended TMAP was prepared to address the above (and other traffic issues) and referred to the MOT for further comment who advised as follows;

*"The Ministry has reviewed the final version of the TMAP.....The Ministry is satisfied that the issues raised in our previous correspondence have been adequately addressed and no further comment is required".*

[comment – a range of issues relating the TMAP, traffic and parking are addressed in the assessment of the proposal (see s.5.18)]

### 6.3.5 Department of Housing

Key comments from the DOH were:

- The Bonnyrigg Living Communities Project is an important renewal project for Housing NSW. It will provide urban renewal to a problematic and run down housing estate, renewal and realignment of housing stock to match existing and projected future demand, improve service provision and assist community and individual capacity of residents in the area. As such Housing NSW supports the subject application.
- Most adverse impacts (as identified in the SIA) are gradual and temporary in nature, nevertheless, Housing NSW and the proponent have put into place a series of mitigating measures to minimise these. For example Housing NSW have given a commitment, that as far as possible, those tenants who wish to stay in Bonnyrigg will be able to do so.
- Some potential adverse impacts identified SIA are linked to housing allocations policies and tenure mix of public housing tenants. Housing NSW considers these policies are outside the scope of the assessable development under the EP&A Act and would need to be considered in the wider context of the Departments role of housing provision within the State. As such the Dept does not consider it appropriate that any conditions be recommended by Council which would limit Housing NSW ability to deliver social housing in line with its State wide policies.
- There will be no overall loss of social housing as a result of the project. If suitable properties are identified then it is possible that there will be no loss of social housing in the LGA. However, there may be a slight loss of social housing in the LGA as a result of the project (up to 134 dwellings out of about 5,240 dwellings). This realignment is in accordance with Housing NSW long term asset plan, which seeks to match future housing stock to projected social housing demand, which seeks to increase stock in high demand areas. In this regard it is likely that any loss of social housing in the LGA will eventually be off set by new stock through a new supply program.
- The proposal has positive benefits for the local area and residents which far outweigh potential adverse impacts.

[comment – issues referred to above in relation to the SIA are addressed in s.5.19 of this report]

### 6.3.6 Sydney South Western Area Health Service

- Overall, the SIA has comprehensively covered many of the health issues that we consider would emerge in the scoping and identification of Health Impact Assessment (HIA)
- The proposal has a number of positive impacts including:
  - increasing housing choice for a range of families and age groups within a well-located site close to transport employment and services.
  - Seniors Living Area will contribute to housing choice for an ageing population
  - Some positive service impacts
  - Improving efficiencies in relation to housing design, recycled water and natural gas
  - Improved public domain amenity including attractive, well-equipped parks, improved streetscapes, new more environmentally efficient and comfortable housing.
  - One stop shop service centre for the location of tenancy, community renewal and communications services
  - Improved public domain safety through design of current Radburn layout of the estate and improved connectivity in the locality and other urban areas
  - Proposal supports Premiers Council for Active Living (PCAL) objectives – urban design promotes the redevelopment of a walkable community close to shops, transport, open space and services, diverse recreational opportunities and increased safety
- Negative Impacts
  - Increased traffic at egress points
  - Physical impacts from the demolition and construction process
  - Safety and security impacts from relocation and demolition – need for good lighting, after hours safety patrols etc
  - Concern that residents become outsiders in their own community with the new public/private mix
  - Those who are most vulnerable may be faced with unintended barriers to remaining in their community such as available housing types for those with special needs
  - Loss of neighbours and stress associated with moving for those with a history of social isolation, trauma and dislocation
  - Proposed increased density may exacerbate neighbourhood conflict, reduced private outdoor space and reduced informal space for on-street parking
  - The loss of cul-de-sacs for private owners within Bonnyrigg as they view these as places of safety, quiet and for neighbourhood interaction.

[comment – the range of issues raised by the SSWAHS have been the subject to extensive investigation under the SIA prepared for the proposal. This work resulted in a range of recommendations aimed at mitigating social impacts of the development (see s.5.19.3), including the provision of a community renewal plan and various actions incorporated under the Statement of Commitments and VPA. In addition a condition is also proposed requiring further consultation between the proponents and SSWAHS in relation to implementation of the PCAL guidelines].

### 6.3.7 NSW Ambulance Service

The only points of concern to the NSW Ambulance Service would be;

- Maintained street signage of street names
- Visible house numbers, particularly at night
- Adequate turning circle for ambulance vehicles, just under 3m wide
- Adequate street lighting
- If medium strips present this would impede vehicle turning accessibility

[comment: the nature and scope of the built form and street layout associated with the proposal generally addresses the above issues, there is no need for further conditions]

### 6.3.8 NSW Fire Service

- Road and access ways within the subdivision, in particular – Stage 1, comply with the requirements detailed in the NSWFB “Guidelines For Emergency Vehicle Access”
- To facilitate rapid fire fighting intervention and other emergency services response the NSWFB recommends that all streets and internal roads are prominently signposted and for all buildings to be clearly identified by their relevant street number
- The NSWFB expects that the sites reticulated water authority main will incorporate the comprehensive installation of the fire hydrants throughout
- The NSWFB has no specific concerns with the proposal as detailed in their submission.

[comment – the layout and width of roads in the development is consistent with the configuration required for this form of residential development, to meet access requirements for emergency vehicles. A condition is included requiring more detailed information in relation to provision of hydrants with a construction certificate].

### 6.3.9 Sydney Water

- Sydney Water generally supports the proposed indicatives to minimise both potable water consumption and wastewater flows as a result of the development
- Sydney Water would further encourage the use of infiltration initiatives (such as reducing the number of maintenance holes, by optimising use of maintenance shafts and use of solvent welded joints for reticulation systems
- The impacts of the development on the existing potable water supply will be dependent on the preferred non-potable water servicing solution.
- Preliminary investigations by Sydney Water indicate that a water boosting pumping station and an additional lead-in water main may be required but this will be subject to the final design peak demands and hydraulic modelling.
- Sydney Water is about to commence strategic planning investigations for the preferred potable water, non-potable and waste water servicing strategy for the Liverpool area, which includes the Bonnyrigg Living Communities Project.
- The developer will need a Section 73 Compliance Certificate from Sydney Water, confirming that the developer meets Sydney Waters infrastructure requirements. The developer must also fund any adjustments needed to this infrastructure.

[comment – A draft deed of agreement has been prepared between the proponent and Dept of Planning covering the provision of a reticulated recycled water supply to the site. In addition, the proponents have entered into discussions with Sydney Water and Alinta regarding commercial arrangements for provision of recycled water use for the site. This aspect of the proposal is also covered under the draft SoC for the proposal see **APPENDIX E**]

### 6.3.10 Integral Energy

- If the electrical load required for this development would be less than 63amps over three phases or less than 100amps single phase then no application is required.
- The applicant should assess their load requirements and when necessary submit an application to Integral Energy.

[comment – a condition of consent has been included to cover the above issue]

## 6.4 PUBLIC SUBMISSIONS

### 6.4.1 Summary of issues raised in public submissions

The following issues were raised in the public submissions:

1. **Dwelling design layouts in general – bedroom sizes should be larger, kitchens to be ventilated, security measures should be installed, front and rear doors should be aligned.**

A number of stakeholders had input into the design of the dwellings proposed within the Bonnyrigg Estate. Significant market research was also undertaken by the proponent, which attempted to gear housing product to what the market was looking for on a number of different levels. Furthermore, there are a number of different types of housing that is provided for in the estate and that also allows a significant amount of variety in the housing which obviously will then have the ability to appeal to a broader range of housing consumers. Whilst there will always be a certain amount of demand that cannot be satisfied by a particular housing product it is considered that the dwelling design layout both in terms of internal floor plan layout, elevations and the features that each of the dwellings contains satisfies the requirements for such a housing development.

2. **Not enough toilets within each dwelling to accommodate size of families.**

With respect to the provisions of toilets within each dwelling, analysis of the design each of the dwelling designs in stage 1 indicates that there is at least two toilets in each of the different dwelling types from the detached housing to the 4-plex. Each level of housing contains a WC at ground level and a bathroom at first floor level within each particular dwelling. This is considered to be adequate with respect to toilet provision within each dwelling.

3. **Request for inclusion of lock up garages and not carports that are unsecured.**

With respect to the provision of car garages and/or carports, analysis of the garage and carport provision indicates that lock up garages have been provided either as part of the dwelling or as detached garages within a significant number of dwelling types. Furthermore, where carports have been provided for the purposes of satisfying car parking requirements, these are provided typically with shutter doors, either as a single carport or double carports within particular locations within the estate. It is considered that this submission has been satisfied given the provision of shuttered carports proposed by the proponent.

4. **Concern regarding noise as a consequence of dwelling location and densities.**

In consideration of the issue of noise being generated as a consequence of dwelling location and densities, the noise generated is considered to be typical of residential development generally. The design has allowed for similar uses within dwellings to be adjacent to similar or other uses so that bedrooms, adjoin bedrooms wherever possible. Whilst increased density is provided it is considered that noise generated as a consequence of the design is unlikely to have an impact on the amenity of residents within the estate.

5. **Safety and security including appropriate street lighting and high level windows.**

Significant consideration has been given to the safety and security to residents within the estate in addition to appropriate street lighting and visibility of the public domain. The consideration for all of this is contained in a separate section of this report. It is considered that these issues been given a high priority in the assessment of the development of the estate with significant surveillance from residents to public areas which seeks to minimise areas where crime and anti-social behaviour can occur.



**6. Narrow roads may be a safety issue for vehicles in general including emergency vehicles, and garbage collection trucks.**

The width of the proposed roads throughout the estate has been considered at length by Council. The proponent has made a case that urban design provisions are at odds with widening roads just for the sake of having wide roads, and have demonstrated that the width of roads are at a level that suits all demands likely to be placed on them. This includes the ability for emergency vehicles and garbage collection trucks to navigate within the streets in an appropriate manner. Council has considered this as an issue from the beginning of development of plans and Council's Traffic and Development Engineers raise no objections with respect to the width of the roads as they are compliant with all relevant standards.

**7. Proposed private open spaces are too small.**

The issue of private open space provision is dealt with elsewhere in this report. However the applicant has made a case that open space areas have been designed to maximise utility of persons using them. Notwithstanding this, Council has raised an issue with the amount of open space provided to particular units and has recommended that certain changes to the DCP with respect to open space provisions be made.

**8. Attached dwellings will impede privacy.**

The development of the estate has necessitated the development of housing types that are designed to maximise the amenity of residents whilst also increasing density within the estate. The dwelling design by definition with the 3-plex and 4-plex and other dwellings means that most dwellings will be attached. This is similar to many parts of metropolitan areas where semi-detached dwellings are located. The consideration for privacy has been raised with the applicant and it is considered that privacy issues have been satisfactorily addressed with respect to design of each of the housing products. It is considered that no adverse impacts with respect to privacy are likely to occur given the design of these dwellings.

**9. Concern regarding compensation, and relocation arrangements particularly for disabled persons, and safety and security fears for those still on the estate during this process. Better management requested.**

The issue regarding relocation arrangements for tenants of the housing estate is not a matter considered in the assessment of this redevelopment. Notwithstanding this, the Department of Housing has in place numerous arrangements in order to ensure appropriate housing needs are met and management of the estate has been designed to cope and deal with tenant demands and needs.

**10. Concern regarding dust impacts during construction.**

With regards to impacts during construction, to ameliorate potential impacts the proponent has prepared and submitted an Environment and Construction Management Plan which forms part of the conditions of consent. This Environment and Construction Management Plan deals with and puts in place a number of measures designed to deal with the construction management of dwellings whilst people still reside within the estate. These measures were clearly identified as an issue in the development of this plan and the welfare and amenity of existing residents residing in the estate whilst construction goes on around them has been adequately considered at length.

**11. Proposed seniors living precinct should be constructed earlier due to the number of seniors on site.**

With respect to seniors living projects, they are proposed to be constructed at later stages in the development of the estate. Notwithstanding this, measures are in place through the Department of Housing processes to ensure that seniors are adequately accommodated should they be displaced as part of this program. Notwithstanding the above, nothing precludes seniors occupying Stage 1 should that be an appropriate location for them.

**12. Location of proposed carpark and amenities in close proximity to Louise Close causing odours, rubbish, people littering, and will prevent view of proposed park.**

The proposed carpark located adjacent to Louise Close is an existing carpark that is being upgraded. In this regard, views of the park would remain as they currently are. Furthermore, the existing carpark is located at grade level and, as such, should not impede any views towards the park from surrounding dwellings.

The management of the carpark will be the responsibility of Bonnyrigg Partnerships, who are now responsible for the care, control and management of all parks within the estate. Bonnyrigg Partnerships have developed a Plan of Management for all public facilities, which deals with the removal of rubbish.

**13. Increased densities not in keeping with the environment.**

The proposed densities throughout the estate was the subject of vigorous assessment at the early stages of redevelopment options, both in terms of bid designs and in terms of responding to what the site could sustain and also what was appropriate in terms of economic viability. Notwithstanding this, the densities proposed are not considered to be excessive, nor are they likely to have a detrimental impact on the environment given the circumstances.

**14. Not enough car parking spaces for residents.**

Stage 1 provides 192 car parking spaces on site for residents. This amount is well in excess of what is required by the Bonnyrigg Masterplan. It is also important to note that much of this parking is accessed via rear access roads. As such, there is no need to provide driveways from the main street. This frees up on-street parking directly in front of the dwelling. There is also an additional 45 spaces on-street car parking spaces provided on the eastern side of Bunker Parade, adjacent to the Park.

Upon assessment of the number of on-site car parking spaces provided for Stage 1, and the provision of further on-street parking available due to the rear access roads, the proposed level of parking is considered acceptable for Stage 1 and for the redevelopment of the whole estate.

**15. The existing Jadran Hajduk Club located on the corner of Edensor Road and Bonnyrigg Avenue should be included in the concept plan area**

The Jadran Hajduk Club is not part of the Bonnyrigg Estate, nor was it considered part of the Concept Plan. It is a separate landholding over which Bonnyrigg Partnerships had no control over in order to include in the redevelopment.

**16. Overhead power lines should be relocated underground.**

In many new subdivisions, it is possible to have powerlines provided underground because the infrastructure cost associated with a greenfield site allows undergrounding a financially viable for the developer. However in the current circumstance where there exist an existing estate with existing services and whilst they are amplified in many cases, the retrofitting of powerlines to an underground location is cost prohibitive and indeed not something that could reasonably be asked of the developer.

**17. An amenities block and change room facilities should be included in the sporting fields planned for Bunker Parade, including flood lighting and parking with respect to use for soccer training/competitions.**

An amenities block with change room facilities is provided within the Lower Valley Sports Park (Park No. 2), which is located where Tarlington Reserve is currently situated. The two (2) soccer fields within this park will incorporate lighting facilities for night-time training and related activities.

**18. Request that cul-de-sacs be retained where private residences are presently located.**

The road pattern design was a matter that was considered very early on in the design process. The roads have been designed to provide appropriate levels of connectivity throughout the estate whilst also considering the impacts of redesigning roads and removing particular road patterns. There is always the case where a personal desire for cul-de-sacs are otherwise are constrained by the greater public good of having roads that allow connectivity and actually contribute to the local street pattern.

**19. Request that house numbering for existing private residents be retained.**

Whilst retaining existing numbering maybe a desire and possibly can be accommodated should it be practical, it is not a major consideration in the planning of this estate.

Most of these submissions raise issues related to dwelling layout and amenity impacts from proposed densities (30 submissions), retention of cul-de-sacs (7 submissions), concern regarding location of carparking and amenities near Louise Close (5 submissions) and concern for narrowness of streets (3 submissions).

General discussion on the key issues which include those raised in submissions is in **Section 5** of this report. The proponent responded to these submissions on 5 June 2008 and the proponent's response to submission is in **APPENDIX F**.

## 7 CONCLUSION

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The Council as the delegate to the Director General has assessed the EA and considered the submissions in response to the proposal. The key issues raised in submissions related to urban design, traffic, parking, provision of infrastructure and community services, management and mitigation of construction impacts. The Council as the delegate to the director General has considered these issues and a number of conditions are recommended to ensure the satisfactory addressing of these issues and minimal impacts as a result of the proposal.

The proposed development will allow for renewal of the Bonnyrigg Housing Estate including new infrastructure, community facilities and services. Furthermore, the Stage 1 project application has complied with the environmental assessment requirements, generally complied with the existing environmental planning instruments and meets the intent of the proposed Concept Plan.

Works and provision of services outlined in the Voluntary Planning Agreement are necessary to address and mitigate environmental and other aspects of the proposal and therefore prior to the consent of stage 1 project application, the Voluntary Planning Agreement needs to be signed and executed by Council and the proponent.

On these grounds, Council as the delegate to the director General considers the site to be suitable for the proposed development and that the project is in the public interest. Consequently, the Council recommends that the project be approved, once the issue of apportionment and requirement of upgrading of two arterial road intersections is resolved between the RTA, Proponent and Department of Planning as per the recommendation and proposed conditions accompanying this report.

## 8 RECOMMENDATION

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Subject to:

- Signing and executing of the Voluntary Planning Agreement
- Inclusion of a condition of consent requiring implementation of the Voluntary Planning Agreement for the proposal (incorporating both the Concept Plan and Stage 1 Project Application)
- Agreement/resolution being reached between the RTA, proponent and Dept of Planning covering the arrangements for apportionment and upgrading of the intersections between Cabramatta Road/Humphries Road and Smithfield/Edensor Roads

It is recommended that the Minister:

- (A) consider the findings and recommendations of this Report;
- (B) **approve** the concept plan for the project, under section 75O *Environmental Planning and Assessment Act, 1979*; subject to modifications of the concept plan; and sign the Determination of the Major Project
- (C) **approve** the Stage 1 Project Application, under section 75P(1)(c) of *Environmental Planning and Assessment Act, 1979*; subdivision to create 106 lots, construction of 106 dwellings, including all infrastructure works, subject to conditions and sign the determination of the Major Project

Prepared by:

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Endorsed by:  
Name  
**Planner Director**  
**Urban Assessments**

Name  
**Executive Director**  
**Urban Renewal and Strategic Sites**

Sam Haddad  
**Director General**

## APPENDIX A. DIRECTOR-GENERAL'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

### CONCEPT PLAN & STAGE 1 PROJECT APPLICATION FOR THE BONNYRIGG LIVING COMMUNITIES PROJECT - REDEVELOPMENT SITE ENVIRONMENTAL ASSESSMENT REQUIREMENTS UNDER PART 3A OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

<b>Project</b>	<b>Concept Application</b> The proposal comprises development as generally described in the Preliminary Environmental Assessment prepared for Bonnyrigg Partnerships dated April 07 for the Bonnyrigg Living Communities Project
<b>Site</b>	Land bounded generally by Bonnyrigg Avenue, Bonnyrigg Public School, Bonnyrigg Plaza, Elizabeth Drive, Cabramatta Road West, Humphries Road and Edensor Road, but excluding privately owned lots which are identified on the Staging Diagram (appendix E) of the Preliminary Environmental Assessment prepared for Bonnyrigg Partnerships by Urbis GHD dated April 2007
<b>Proponent</b>	Bonnyrigg Partnerships
<b>Date of Issue</b>	29 May 07
<b>Date of Expiration</b>	(2 years from date of issue)
<b>Special Provision</b>	The Minister for Planning formed the opinion pursuant to clause 6 of <i>State Environmental Planning Policy (Major Projects) 2005</i> (MP SEPP) that the project is a Major Project under Part 3A of the <i>Environmental Planning and Assessment Act 1979</i> on 30 June 2006
<b>General Requirements</b>	The environmental assessment must include: <ul style="list-style-type: none"> <li>• an executive summary;</li> <li>• a description of the proposal including: <ul style="list-style-type: none"> <li>◦ description of the site, including cadastre and title details;</li> <li>◦ design, construction, operation, maintenance, rehabilitation and staging as applicable; and</li> <li>◦ project objectives and need (if relevant);</li> </ul> </li> <li>• an assessment of the environmental impacts of the project, with particular focus on the key assessment requirements specified below; and</li> <li>• a statement on the validity of the environmental assessment, the qualifications of person(s) preparing the assessment and that the information contained in the environmental assessment is neither false nor misleading.</li> </ul>
<b>Key Assessment Requirements</b>	<p><b>Part A – Heads of Consideration</b></p> <ul style="list-style-type: none"> <li>• Suitability of the site;</li> <li>• Likely environmental, social (including cultural) and economic impacts;</li> <li>• Justification for undertaking the project; and</li> <li>• The public interest.</li> </ul> <p><b>Part B – Relevant EPIs and Guidelines to be addressed</b></p> <ul style="list-style-type: none"> <li>• Planning provisions applying to the site including permissibility and the provisions of all plans and policies;</li> <li>• Compliance with the Sydney Metropolitan Strategy and any relevant (draft) sub regional strategy</li> <li>• Nature and extent of non-compliance with specified EPIs and relevant DCP's (note variations from the principles of the Bonnyrigg Town Centre Development Control Plan No.28, in particular Part 3 - Master Plan of the Bonnyrigg Town Centre, Part 4 -Guidelines for the Public Domain and Part 5 - Guidelines for the Private Domain, which are relevant to the site will be clearly highlighted and justified); and</li> <li>• Consideration of alternatives to the proposal.</li> </ul>

	<p><b>Part C – Key Issues to be addressed</b></p> <ul style="list-style-type: none"> <li>Requirements of the Director General and other agencies are as follows:</li> </ul> <p><b>Proposal Description</b></p> <p>The proposal and its components should be described and illustrated, including:</p> <ul style="list-style-type: none"> <li>Land use distribution (residential, commercial, retail, open space).</li> <li>Community and recreation facilities.</li> <li>Road hierarchy/layout, access, and car parking provision.</li> <li>Open space and access networks.</li> <li>Landscaping areas.</li> </ul> <p><b>Urban Form and Design</b></p> <p>A suitable urban design response should be developed in compliance with BASIX principles and where relevant, provisions of SEPP 65, in particular siting and orientation of buildings and solar access. Appropriate development controls should be established, including density, building heights, footprints, entry points, public domain, private open space and car parking.</p> <p>Key matters to be addressed include an analysis of existing bulk and scale of surrounding development, landmark buildings, density, heights, topography, streetscape, overshadowing, view corridors, connectivity, street address, open space, vegetation, traffic management and road hierarchy.</p> <p>Alternative options for layout, built form, densities and development parameters should be identified. All constraints, opportunities and merits of alternative options should be articulated. Consideration should be given to housing forms which are appropriate to a mix of diverse cultures.</p> <p>Information to be provided covering the rationale underpinning the allocation of open space for the projected increase in residential population and the specified users of various open space areas.</p> <p><b>Social &amp; Health Impacts</b></p> <p>Address the relocation and rehousing of existing residents during the construction phase of the development (in particular Stage 1 – Project Application) and any longer term impacts on the residents of the Estate and surrounding community.</p> <p>As the existing housing provides housing for tenants of the Dept of Housing, the impact on these residents and neighbouring community must be addressed. The issue of relocation and rehousing of the non government organisations currently resident on the Estate and providing services to the community also needs to be addressed.</p> <p>Undertake a community needs analysis to inform the provision of a community facility on the estate including its location and relationship to other services. This analysis should also have regard to the capacities of current facilities in the area (including school and health facilities) to cater for the anticipated growth and demand in the locality.</p> <p>The Environmental Assessment is to include a Health Impact Assessment which describes how the proposed physical environment promotes public health in regard to human comfort and capacity to support physical activity, and in particular addresses the NSW Governments guidelines <i>Designing Places for Active Living</i> issued by the Premiers Council for Active Living located at <a href="http://www.pcal.nsw.gov.au">www.pcal.nsw.gov.au</a></p> <p>The project must address long term social sustainability issues such as housing tenure issues, housing mix, community safety, local community impacts and minimisation of crime.</p> <p><b>Safety/Public Domain/Pedestrians</b></p> <p>The environmental assessment should include design measures which:</p> <ul style="list-style-type: none"> <li>Maximise safety and security within the public domain;</li> <li>Maximise surveillance and activity within the public domain;</li> <li>Maximise safety and security for occupancy of buildings;</li> </ul>
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	<ul style="list-style-type: none"> <li>• Ensure access for people with disabilities;</li> <li>• Minimise potential for vehicle and pedestrian conflicts; and</li> <li>• Demonstrate good urban design and quality landscaping of the public domain</li> </ul> <p>(Note: to assist consideration of suitable design measures, guidelines have been developed by Department of Planning: <i>Crime prevention and assessment of development applications 2001</i> and the NSW Police <i>Safer by Design Evaluation</i>)</p> <p><b>Transport, Traffic &amp; Access</b> The environmental assessment needs to satisfactorily address the following transport, traffic and access issues as set out below.</p> <ul style="list-style-type: none"> <li>• Strategic transport policy matters;</li> <li>• Opportunities to minimise traffic on sensitive road frontages (schools, high density residential development, Town Centre streets);</li> <li>• Efficiency of new roads on the site, as well as proposed access and circulation, car parking (including parking restrictions), and drop off arrangements for schools or facilities;</li> <li>• Efficiency of emergency and any service vehicle access/egress;</li> <li>• Proposed access from the wider road network as well the opportunities and constraints of alternative vehicular access points;</li> <li>• Measures to promote public transport usage and mode share; and</li> <li>• Pedestrian and bicycle linkages.</li> <li>• Assessment of need to improve/upgrade any intersections, including the need for traffic signals or local area traffic management devices</li> <li>• Initiatives which help to lessen reliance on private vehicles by residents.</li> </ul> <p><b>Planning Agreements and/or Developer Contributions</b> The environmental assessment should address and provide the likely scope of a planning agreement and/or developer contributions between the proponent, Council and other agencies for matters such as community, regional and local infrastructure, public transport provision, social infrastructure and facilities etc either on site or within the LGA.</p> <p><b>Ecologically Sustainable Development</b> The environmental assessment shall detail how the development will incorporate ESD principles in design, construction and ongoing operation phases.</p> <p><b>Contamination &amp; Geotechnical issues</b> Contamination and geotechnical issues associated with the proposal should be identified and addressed in accordance with SEPP55 and other relevant legislation and guidance. This assessment should also include an analysis of any risks/hazards associated with urban salinity.</p> <p><b>Environmental Management</b> Measures should be identified that will prevent, control, abate or minimise environmental impacts associated with the project and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.</p> <p><b>Drainage &amp; Stormwater Management</b> The environmental assessment should address drainage and stormwater management issues, and include modelling and analysis of mainstream and overland flooding to identify the adequate provision of: on site detention of stormwater, water sensitive urban design (WSUD), and drainage infrastructure. Information should also be provided on:</p> <ul style="list-style-type: none"> <li>• Measures which mitigate potential impacts on Green Valley and Clear Paddock Creeks</li> <li>• Potential impacts (both temporary and permanent) on surface and groundwater flow, aquatic and riparian habitats.</li> </ul>
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	<p><b>Utilities Infrastructure</b> The environmental assessment should include details of how the development proposal will be satisfactorily serviced for utility services such as the supply of water, sewerage, stormwater, gas, electricity and telephone / telecommunications services and comply with the requirements of any public authorities (e.g. Sydney Water, Integral Energy, Telstra Australia etc) in regard to the connection to, relocation and/or adjustment of the services affected by the development proposal.</p> <p><b>Heritage and Cultural Significance</b> The environmental assessment should have regard to heritage issues relevant to the site, including:</p> <ul style="list-style-type: none"> <li>• Address and document information requirements set out in the draft <i>Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation</i> prepared by the Dept of Environment and Climate Change</li> <li>• Heritage impact assessment for the extent of development shown within the Concept Plan directly adjoining and within proximity to (affecting streetscape vistas or district views) of the local heritage item at 26 Bonnyrigg Ave (Khmer Temple)</li> </ul> <p><b>Statement of Commitments</b></p> <ul style="list-style-type: none"> <li>• Proposed mitigation and management of residual impacts; and</li> <li>• A draft Statement of Commitments detailing measures for environmental management (including a preliminary waste management plan) and mitigation measures and monitoring for the project. This should include preparation of a preliminary waste management plan in accordance with NSW DEC(EPA) guidelines and relevant legislation addressing issues including (but not limited to) reuse, recycling and/or disposal of waste including waste-water and building materials.</li> </ul> <p><b>Test of adequacy</b> If the Director-General considers that the Environmental Assessment does not adequately address the Environmental Assessment Requirements, the Director-General may require the proponent to submit a revised Environmental Assessment to address the matters notified to the proponent. The Director-General may modify these requirements by further notice to the proponent.</p> <p><b>General Environmental Risk Analysis (in relation to all components of the project)</b> Notwithstanding the above key assessment requirements, the Environmental Assessment must include an environmental risk analysis to identify potential environmental impacts associated with the project (construction and occupation), proposed mitigation measures and potentially residual environmental impacts after the application of proposed mitigation measures. Where additional key environmental impacts are identified through this environmental risk analysis, an appropriately detailed impact assessment of the additional key environmental impacts must be included in the Assessment.</p>
<p><b>Consultation Requirements</b></p>	<p>You should undertake an appropriate and justified level of consultation with relevant following parties during the preparation of the environmental assessment and include evidence of such consultation with the environmental assessment:</p> <p>(a) Agencies or other authorities:</p> <ul style="list-style-type: none"> <li>• Roads and Traffic Authority</li> <li>• Department of Education and Training</li> <li>• Department of Planning (Sydney West Region office)</li> <li>• Department of Environment and Conservation</li> <li>• Department of Housing</li> <li>• Fairfield City Council</li> <li>• NSW Police Service (Fairfield Command)</li> <li>• Sydney Water</li> <li>• Telstra Corporation</li> <li>• Integral Energy</li> </ul>

<p><b>Specific Requirements - Stage 1 – Project Application</b></p>	<ul style="list-style-type: none"> <li>• AGL</li> </ul> <p>(b) Public:</p> <ul style="list-style-type: none"> <li>• Document all community consultation undertaken to date and discuss the proposed strategy for undertaking community consultation. This should include any contingencies for addressing any issues arising from the community consultation and an effective communications strategy.</li> </ul> <p>(c) Peer Review Requirements:</p> <ul style="list-style-type: none"> <li>• List any components of the Environmental Assessment to be independently peer reviewed prior to submission.</li> </ul> <p>In addition to the general environmental assessment requirements specified above, the following specific detailed requirements relate to preparation of the Stage 1 – Project Application</p> <ol style="list-style-type: none"> <li>1. A <b>survey plan</b> prepared by a registered surveyor preferably drawn to a scale of 1:200 or 1:500 showing: <ul style="list-style-type: none"> <li>• Site map showing location of the land, the measurement of the boundaries of the land, the size of land parcels and north direction</li> <li>• Existing levels of the land in relation to buildings and road.</li> <li>• the exact location of the existing buildings and other features on the site (e.g.: shed, pergola.</li> <li>• Position of easements, existing significant vegetation and topographic feature</li> </ul> </li> <li>2. <b>Site development plans</b> preferably drawn to a scale of 1:200 or 1:500 showing: <ul style="list-style-type: none"> <li>• Site analysis and opportunities for development in relation to solar access, prevailing winds and site constraints</li> <li>• Architectural elevations and floor plans, including a section from at least one direction of the proposal, height of retaining walls and fences, elevations for each direction of the proposal.</li> <li>• Location of building envelopes or any structures on the land in relation to the boundaries of the land and any development on adjoining land</li> <li>• Proposed lot layouts, configuration and lot sizes</li> <li>• Indicative floor plans of the proposed buildings indicating apartment/dwelling types, layout, size, orientation and FSR ratios</li> <li>• Location and size of vertical and horizontal separation of any lifts, stairs and corridors, fenestrations, balconies and other features</li> <li>• Communal facilities and service points</li> <li>• The height of the proposed development at all levels in relation to the land (to be given in Relative Levels to Australian Height Datum).</li> <li>• Any changes that will be made to the level of the land by excavation, filling or otherwise</li> <li>• Stormwater concept plan, including calculations for any on-site-detention (note: refer to Fairfield City Council's Stormwater Drainage Policy 2002 and Urban Areas On-Site Detention Handbook, for further details)</li> <li>• View analysis (artists impression, photomontages, etc) of the proposed development</li> <li>• Confirmation that the development complies with BCA requirements.</li> </ul> </li> <li>3. A <b>schedule of Materials and Finishes</b>, detailing all proposed materials and finishes.</li> <li>4. <b>Shadow Diagrams</b> drawn to scale showing solar access to the site and impacts on adjacent sites relating to summer solstice, winter solstice and equinox at 9.am, 12midday and 3pm</li> </ol>
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	<p>5. <b>Landscape Plans</b> detailing any trees to be removed, existing and proposed planting (for proposed planting documentation on the type of species and their growth at full maturity is needed), retaining walls, garbage enclosures, detention basins, fences and paving.</p> <p>6. <b>Erosion and Sediment Control Plan</b> detailing how soil erosion will be minimised on the site. The plan should be drawn to a scale of 1:200 or 1:500 and show; proposed finished surface contours (to be given in Relative Levels to Australian Height Datum), waste stock pile, location and type of erosion and sediment control measures</p>
<b>Deemed refusal period</b>	60 days (see Clause 8E of the Environmental Planning & Assessment Regulation)
<b>Panels constituted under s75G</b>	No Independent Hearing and Assessment Panels (constituted by the Minister) are required at this stage. Council may refer the concept plans to its own IHAP at various stages throughout the process.
<b>Application Fee Information</b>	Fees are applicable to the application. The fee is based on estimated cost of works as per the <i>Environmental Planning and Assessment Regulation 2000</i> . A Quantity Surveyors report is required verifying the capital investment value of the development.
<b>Landowners Consent</b>	Landowner's consent is to be provided in accordance with the <i>Environmental Planning and Assessment Regulation 2000</i> .
<b>Documents to be submitted</b>	20 hard copies of the environmental assessment. 20 sets of architectural and landscape plans, including one set to A3 size Five (5) copies of the environmental assessment and plans on CD-ROM (pdf format). Plans and Drawings.

## APPENDIX B. COMPLIANCE WITH EPIS INCLUDING STATE ENVIRONMENTAL PLANNING POLICIES THAT SUBSTANTIALLY GOVERN THE CARRYING OUT OF THE PROJECT

Environmental Planning Instruments considered in the assessment of the proposal:

Environmental Planning Instrument	Consideration
Part 3A of EP&A Act 1979 and SEPP (Major Projects) 2005	Environmental Assessment Report (EAR) submitted addressing Director-General's Requirements. Preferred Project Report (PPR) submitted.
SEPP No. 11 – Traffic Generating Developments	Proposal referred to the Sydney Regional Advisory Committee of the RTA. The Committees comments addressed in <b>s.6.3.3</b> of this report.
SEPP No. 55 – Remediation of Land	Preliminary site assessment undertaken indicating presence of fill on parts of the site. Further investigations, included more detailed analysis to be prepared and submitted to Council prior to each stage of construction.
SEPP No. 65 – Design Quality of Residential Development	No apartments proposed in Stage 1. Detailed assessment to be undertaken at relevant stages.
SEPP (Housing for Seniors or People with a Disability) 2004	No Seniors Living housing proposed in Stage 1. Detailed assessment to be undertaken at relevant stages.
SEPP (Building Sustainability Index: BASIX) 2004	BASIX certificates lodged with PPR. BASIX targets achieved for energy efficiency and water reduction.
Draft SEPP (Integration of Land Use and Transport)	Proposal contains a range of measures which support the aims and objective of the SEPP, including opportunities for reduced vehicle journeys, improved access to existing facilities, greater opportunities for walking and cycling.
Fairfield LEP 1994	Minor adjustment to 2(a) Residential and 6(a) Existing and Proposed Recreation zone boundary Complies with cl. 25H

## APPENDIX C. COMPLIANCE WITH DCPS AND OTHER PLANS AND POLICIES

Compliance with Chapter 5 of the Fairfield City-Wide DCP – Single Dwelling Housing, is outlined in the following table.

CRITERIA	STANDARD REQUIRED	PROPOSED	COMPLIES
Lot size	Minimum 450m <sup>2</sup>	> 450m <sup>2</sup>	<b>No</b>
Floor Space Ratio (FSR)	Residential 2(a) = 0.45:1	N/A	N/A
Setbacks	Front 4.5 metres  Side/secondary – 900mm	Lots 8, 13 & 35 do not comply  All dwellings comply	The majority of dwellings comply
Building Appearance	No bland or bulky facades Building elevations fronting the street	The western elevation for Lot 30 is considered to be poor for a corner site. It is not adequately articulated or finished.  Amended elevation plan will be required	Yes - with the exception of the proposed dwelling on Lot 30
Building Heights	9m to ridgeline & 7.2m to eaves line	8.0m to ridge 6.3m to eaves	Yes
Cut & Fill	Maximum 1 metre contained within the building	1 metre building platforms	Yes
Car Parking & Access	3 spaces per dwelling	14 dwellings Required - 42 Provided - 28	<b>No</b>
Fencing	Front – 1.5m in height Side & rear - 1.8m in height	Fencing Strategy considered to be satisfactory	Yes
Private Open Space	80m <sup>2</sup>	9 out of 14 dwellings are provided with POS > 80m <sup>2</sup>	<b>No</b>
Clause 5.7 Landscaping	Minimum 30% of site to be soft soil zone	All dwellings have soft soil landscaping >30%	Yes
Clause 5.8 Solar Access Issues	Windows of adjacent housing and more than 2/3 of their open space receive at least 4 hours direct sunlight during winter months.	89 out of 106 dwellings in Stage 1 comply. This equates to 84% compliance.	The majority of dwellings comply
Clause 6B.11 Privacy	Dwellings to be designed to minimise windows overlooking adjacent dwellings	Dwellings are considered to be satisfactory	Yes

Compliance with Chapter 6A of the Fairfield City-Wide DCP, Multi Dwelling Housing – Townhouse/Villa is illustrated in the following table:

CRITERIA	STANDARD REQUIRED	PROPOSED	COMPLIES
Floor Space Ratio (FSR)	Residential 2(a1) = 0.45:1	No FSR control proposed	N/A
Balanced Building Form	GFA of upper floors shall be a max. of 65% of the GFA at ground level	100%	<b>No</b>
Mix of Units	Mix of Units 6-10 Units – one (1) x 2 b/r or two (2) b/r	Adequate mix of 2, 3, 4 & 5 b/r units provided	Yes
Units Per Site Area	Site > 28 metres 2 b/r – 230m <sup>2</sup> 3 b/r – 250m <sup>2</sup>	N/A	N/A
Lot width and Depth	Average min. lot width and depth of 22 metres	All dwellings comply	Yes
Setbacks	Front – 6 metres Side & Rear – 900mm Upper floor side walls – 900mm for first 20 metres and 4 metres beyond the first 20 metres	Front – 6 metres Side and Rear – 900mm Upper floor 900mm and 4.0 metres	<b>No</b> Yes
Building Separation	8 metre separation for dwellings facing one another	N/A	N/A
Dwelling Position/ Orientation	- Visual integration with surroundings - Maintain/enhance appropriate residential character - Minimise visual bulk and scale	Development considered satisfactory	Yes
Development Façade	- Efficient use of POS - Ensure Development respects established building pattern - Ensure visual interest - Ensure human scale - Ensure articulation to provide visual relief	Development considered satisfactory	Yes
Building Height	Max. 2 storeys 9m to eaves & 7.2m to ridgeline	< 9m to ridge < 7.2m to eave	Yes
Size of Rooms & Storage	- Bedrooms – 9m <sup>2</sup> with 2.7m min. dimensions - Dining - 9m <sup>2</sup> with 3m min. dimensions - Living – 18m <sup>2</sup> with 4m min. dimensions	Many living and dining areas are below this requirement	The majority of dwellings comply
Access For All Residents	6-10 Units – 1 Villa	No single storey villas	<b>No</b>
Safety and Security	Create a safe and secure environment	Development considered satisfactory	Yes
Car Parking	1-2 b/r unit or less than 110m <sup>2</sup> - 1 space 3 or more b/r unit and/or greater	2 b/r dwellings <110m <sup>2</sup> - 15 <b>(15 spaces)</b>	<b>No</b> Shortfall of 32 spaces

CRITERIA	STANDARD REQUIRED	PROPOSED	COMPLIES
	<p>than 110m<sup>2</sup> - 2 spaces Visitors - 0.25 spaces per dwelling</p> <p>* The above parking rates are for on-site parking spaces</p>	<p>3 or more b/r unit and/or greater than 110m<sup>2</sup> -91 <b>(182 spaces)</b> Visitors <b>(27 spaces)</b> Required - 224 Provided – 192</p>	
Private Open Space	<p>2 b/r unit – 50m<sup>2</sup> 3 b/r unit – 60m<sup>2</sup></p>	Only 62 out of 106 dwellings exceed 50m <sup>2</sup>	<b>No</b>
Landscaping	<p>* 1.5m landscape strip at the boundary line * Trees with minimum full height growth of 8m across frontage of boundary at 7m intervals * Landscaping to comply with landscape code * Existing significant trees to be maintained</p>	Landscaping plan considered satisfactory	Yes
Clause 6A.10 Solar Access	Windows of adjacent housing and more than 2/3 of their open space receive at least 3 hours direct sunlight during winter months.	89 out of 106 dwellings in Stage 1 comply. This equates to 84% compliance.	The majority of dwellings comply
Clause 6A.11 Privacy	Dwellings to be designed to minimise windows overlooking adjacent dwellings	Dwellings are considered to be satisfactory	Yes

## **APPENDIX D. ENVIRONMENTAL ASSESSMENT**

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Due to the large size of the document the Environmental Assessment will be made available on disc



## APPENDIX E. STATEMENT OF COMMITMENTS

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Under the Preferred Project Report, the following revised Statement of Commitments have been submitted by the proponent for various aspects of the proposal.

### 1. CONCEPT PLAN

The following outlines the Statement of Commitments proposed by Bonnyrigg Partnerships for the Concept Plan for the Bonnyrigg Living Communities Project. The draft Statement of Commitments identifies the following:

- General terms that the project will adhere to.
- Contributions made by the proponent in accordance with the Voluntary Planning Agreement.
- Measures to mitigate for any environmental impacts.
- Measures to monitor the environmental performance of the project.
- Achieving minimal impact in the environment and a positive environmentally sustainable outcome.

#### A COMMITMENTS RESTRICTING THE TERMS OF APPROVAL

1. The proposed development will be carried out generally in accordance with the following plans and documentation submitted with the Preferred Project Report:
  - Land Use Plan, dated June 2008.
  - Road Hierarchy Plan, dated June 2008.
  - Indicative Staging Plan, dated June 2008.

#### B COMMITMENTS COMPRISING PAYMENT OF A MONETARY CONTRIBUTION

2. The proponent will enter into a Voluntary Planning Agreement (VPA) with Fairfield City Council for the purposes of providing either dedicating land free of cost, payment of a monetary contribution, or provision of any other material public benefit, or any combination of them, to be used for or applied towards a public purpose.

#### C SOCIAL IMPACTS

3. The proponent will implement the Community Renewal Services Plan.

#### D INFRASTRUCTURE

4. The proponent will commit to the provision of infrastructure in accordance with the Bonnyrigg Infrastructure Delivery Plan.
5. The proponent will undertake all external intersection upgrades in accordance with the revised TMAP.

#### E DEMOLITION

6. The proponent will undertake all demolition works in accordance with the requirements of Council, the DECC and WorkCover.
7. Demolition will be undertaken in accordance with the Staging Plan. No further approvals will be required following Concept Plan Approval.
8. Demolition will be undertaken in accordance with the requirements of Australian Standard AS2601 – 2001: The Demolition of Structures, which is incorporated into the Occupational Health and Safety Act 2000 administered by WorkCover NSW.
9. A Hazardous Materials Management Plan will be prepared prior to commencement of demolition to be detailed in Construction Environmental Management Plan.
10. Measures which will be adopted in order to control run off during the demolition process are to be detailed in the Construction Environmental Management Plan.
11. A Waste Management Plan will be prepared prior to the commencement of demolition and where possible materials will be recycled for reuse on the site.
12. A Community Access and Safety Plan will be prepared to maintain access to, and to ensure the safety of, the existing community through the demolition process.
13. Demolition will occur in consultation with the community and will be integrated within the renewal and re-housing management strategies on the site.

## 2. STAGE 1 (PROJECT APPLICATION) - SUBDIVISION

The following outlines the Statement of Commitments proposed by Bonnyrigg Partnerships to facilitate the subdivision component of the Stage 1 Project Application. The Statement of Commitments identifies the following:

- General terms that the project will adhere to.
- Contributions made by the proponent in accordance with the Voluntary Planning Agreement.
- Measures to mitigate for any environmental impacts.
- Measures to monitor the environmental performance of the project.
- Achieving minimal impact in the environment and a positive environmentally sustainable outcome.

### **A. COMMITMENTS RESTRICTING THE TERMS OF APPROVAL**

1. The proposed development will be carried out generally in accordance with the plans provided with the Bonnyrigg Living Communities Project Preferred Project Report and accompanying Appendices, except as otherwise provided by this Statement of Commitments.
2. Prior to the issue of a Construction Certificate, all general commitments, and all specific commitments relating to the Construction Certificate will be complied with.
3. Prior to the endorsement of a Subdivision Certificate, all general commitments, and all specific commitments relating to the Subdivision Certificate will be complied with.

### **B GENERAL**

4. A copy of the Minister's approval in accordance with Section 75J(1) of the Act, a copy of the Statement of Commitments, and relevant Construction Certificates, including associated approved plans, will be kept onsite at all times during construction.
5. Signs to be erected at gate entries and/or most prominent position on the work site detailing:
  - a) That unauthorised entry to the work site is prohibited; and
  - b) Indicating the name of the contact person in charge of the work site and a telephone number at which that person may be contacted outside working hours.Any such signs are to be removed at the completion of construction works.
6. Toilet facilities will be provided at or in the vicinity of the site on which work is being carried out. Toilets to be provided at a rate of one toilet per every 20 persons or part of 20 persons employed at the site.
7. The Building Contractor will make provision for safe, continuous movement of traffic and pedestrians in public roads and erecting traffic warning signs conforming to the Roads and Traffic Authority's general specifications.

### **C OPEN SPACE AND LANDSCAPING**

8. The Proponent will provide for the development of new open space as part of the renewal process and Stage 1 works. The Stage 1 portion of the open space in the central valley shall be provided as detailed in the Bonnyrigg Masterplan.
9. The Proponent will carry out all landscaping works in accordance with relevant Council standards, the Landscape Management Plan and as detailed in the Bonnyrigg Masterplan.

**D ENGINEERING, INFRASTRUCTURE AND SERVICES**

10. The Proponent will provide for new roads and connections contained within Stage 1 as per the plans included in the Bonnyrigg Masterplan.
11. All roads will be designed and constructed to all relevant Australian Standards and Council's standards.
12. The Proponent will provide recycled water reticulation to each residential lot through dual reticulation when service is available in consultation with Council, Sydney Water and other suppliers.
13. The Proponent will provide reticulated potable water and sewage services to each lot in the subdivision in accordance with Sydney Water.
14. The Proponent will provide access to the potable water supply for active public reserve.
15. The Proponent will conserve, protect or relocate (as appropriate) the existing services passing through the site, including stormwater, sewer, water, telecommunications and electricity.
16. The Proponent will provide underground power to each residential lot in accordance with Integral Energy's standards and requirements.
17. The Proponent will provide underground telecommunications infrastructure to each lot in the subdivision in accordance with Telstra requirements.
18. The Proponent will provide broadband to all new dwellings on site.
19. The Proponent will provide gas to all dwellings for uses including hot water, heating and cooking.

**E WATER SENSITIVE URBAN DESIGN**

20. The Proponent will apply the principles of Water Sensitive Urban Design (WSUD) to the stormwater flows that enter and leave the site, as well as those that are generated through impervious surfaces on the site.
21. The Proponent will ensure that all proposed measures related to treatment or filtration of all stormwater will be designed and constructed in accordance to DECC guidelines for a three month average recurrence interval storm event. The proposed measures should include but not be limited to:
  - Details as to treatment measures of stormwater to water quality specifications as required by Council, DECC and ANZECC guidelines, including treatments to any ponds;
  - Details on how the stormwater quantity shall be ensured in regards to the satisfaction of pre or post conditions (i.e. downstream properties are not affected by any increased flows from the site); and
  - Details on how existing overland flow-paths will be maintained wherever possible, plus ensure velocity depth limits are satisfied (i.e. safe during peak events).

22. The Proponent will design and construct the stormwater/drainage network in order to avoid increasing stormwater flows for all events up to a 1-in-100-year average recurrence interval event.

**F ECOLOGICAL SUSTAINABLE DEVELOPMENT**

23. The Proponent will adopt and implement the principles and measures of ecological sustainable development for water, energy and occupant wellbeing, health and amenity in accordance with the Concept Plan.

## **G CONSTRUCTION**

### **24. Construction Environmental Management Plan**

Prior to any works commencing the Proponent will prepare a Construction Environmental Management Plan (CEMP) to be designed and implemented to manage all environmental aspects associated with the construction. The CEMP will identify construction measures and practices to be established for the purposes of minimising potential construction impacts such as erosion and sediment transfer, construction traffic, noise and worker safety.

The CEMP will be maintained on site during all site works and be available to authorised persons upon request.

The CEMP will include the preparation and implementation of the following management plans but not be limited to:

- a) A Site Management Program, identifying and addressing issues such as occupational health and safety, site security, emergency response protocol including key contacts and any training procedures required by either visitors or site personnel.
- b) A Soil and Water Management Plan (SWMP) detailing all erosion and sediment control, management of soil stockpiles, control and management of surface water. The SWMP shall also include proposed measures to address potential land contamination including the need to undertake site assessments and remediation.
- c) A Noise Vibration Management Plan (NVMP) detailing measures to minimise the impact of construction on residential amenity. Noise and vibration monitoring to be incorporated into the program, however only to be undertaken during the construction as necessary.
- d) A Dust Management Plan prior to demolition and construction in order to manage and where possible minimise the generation of dust.
- e) A detailed Traffic Management Plan prior to construction, and includes a driver code of conduct for construction vehicles associated with the proposed works.
- f) A Hazardous Material Management Plan prepared in accordance with all relevant requirements of Council, DECC and WorkCover.
- g) An Erosion and Sediment Management Plan (ESMP) prepared and implemented and shall include, but not be limited to, details of control measures to ensure protection against sediment laden runoff during the construction.

25. All excavation works will be undertaken as per plans lodged with approved Construction Certificates and in accordance with all the relevant requirements of Council, DECC and WorkCover.

26. The Proponent will undertake further assessment in regards to contamination as recommended in the assessment reports prepared by JBS Environmental, Preliminary Environmental Site Assessment Report September 2007 and Preliminary Environmental Site Assessment Report Stage 1 September 2007.

27. Landscaping will be undertaken in accordance with the Landscape Masterplan included in the Bonnyrigg Masterplan.

28. The Proponent will ensure that all services remain uninterrupted to the estate during the construction stages.

29. The Proponent will provide certification to the PCA confirming that all outdoor lighting complies with, where relevant, AS/NZ1158.3: 1999 Pedestrian Area (Category P) Lighting and AS4282: 1997 Control of the Obtrusive Effects of Outdoor Lighting.

30. The hours of construction will be 7.00am to 6.00pm Monday to Friday and 8.00am to 1.00pm on Saturdays. No construction work will be carried out on Sundays or Public Holidays.
31. Notwithstanding the above restrictions to working hours, the proponent and/or the building contractor may apply to the Director-General to extend the working hours in certain circumstances, if required.
32. Notwithstanding the above restrictions to working hours, works and/or the delivery of goods works for emergencies (as required by the Police or any other authority) may be undertaken outside the specified working hours for safety reasons where people, equipment and/or properties are in danger. The extension of working hours may be undertaken (in case of emergency situations) provided that the proponent notifies the Department immediately, and explains the circumstances and reasons for extending the specified working hours, and the intended duration of the extension.
33. The Building Contractor will be responsible for maintaining the site and adjoining areas in full compliance with the OH & S Act 2000 and OHS Regulations 2001.
34. Prior to construction the developer will determine the location and quantity of temporary construction offices and amenities. Temporary construction office and amenities on the site will be established in accordance with Work Cover requirements and authority approvals.
35. All materials, machinery and items associated with the construction will be contained within the site.

### 3. STAGE 1 (PROJECT APPLICATION) - DWELLING CONSTRUCTION

The following outlines the Statement of Commitments proposed by Bonnyrigg Partnerships to facilitate the dwelling construction component of the Stage 1 Project Application. The Statement of Commitments identifies the following:

- General terms that the project will adhere to.
- Contributions made by the proponent in accordance with the Voluntary Planning Agreement.
- Measures to mitigate for any environmental impacts.
- Measures to monitor the environmental performance of the project.
- Achieving minimal impact in the environment and a positive environmentally sustainable outcome.

#### **A. COMMITMENTS RESTRICTING THE TERMS OF APPROVAL**

1. The proposed development will be carried out generally in accordance with the plans provided with the Bonnyrigg Living Communities Project Preferred Project Report and accompanying Appendices, except as otherwise provided by this Statement of Commitments.
2. Prior to the issue of a Construction Certificate, all general commitments, and all specific commitments relating to the Construction Certificate will be complied with.

#### **B GENERAL**

3. A copy of the Minister's approval in accordance with Section 75J(1) of the Act, a copy of the Statement of Commitments, and relevant Construction Certificates, including associated approved plans, will be kept onsite at all times during construction.
4. Residents and local authorities will be notified of the intended construction timetable and kept up to date for the duration of the construction works.
5. Signs to be erected at gate entries and/or most prominent position on the work site detailing:
  - a) That unauthorised entry to the work site is prohibited; and
  - b) Indicating the name of the contact person in charge of the work site and a telephone number at which that person may be contacted outside working hours.Any such signs are to be removed at the completion of construction works.
6. Toilet facilities will be provided at or in the vicinity of the site on which work is being carried out. Toilets to be provided at a rate of one toilet per every 20 persons or part of 20 persons employed at the site.
7. The Building Contractor will make provision for safe, continuous movement of traffic and pedestrians in public roads and erecting traffic warning signs conforming to the Roads and Traffic Authority's general specifications.

#### **C ECOLOGICAL SUSTAINABLE DEVELOPMENT**

8. The Proponent will adopt and implement the principles and measures of ecological sustainable development for water, energy and occupant wellbeing, health and amenity as per the Statement of Commitments for the Concept Plan.

#### **D CONSTRUCTION**

9. Construction Environmental Management Plan

Prior to any works commencing the Proponent will prepare a Construction Environmental Management Plan (CEMP) to be designed and implemented to manage all environmental aspects associated with the construction. The CEMP will identify construction measures and

practices to be established for the purposes of minimising potential construction impacts such as erosion and sediment transfer, construction traffic, noise and worker safety.

The CEMP will be maintained on site during all site works and be available to authorised persons upon request.

The CEMP will include the preparation and implementation of the following management plans but not be limited to:

- a) A Site Management Program, identifying and addressing issues such as occupational health and safety, site security, emergency response protocol including key contacts and any training procedures required by either visitors or site personnel.
  - b) A Soil and Water Management Plan (SWMP) detailing all erosion and sediment control, management of soil stockpiles, control and management of surface water. The SWMP shall also include proposed measures to address potential land contamination including the need to undertake site assessments and remediation.
  - c) A Noise Vibration Management Plan (NVMP) detailing measures to minimise the impact of construction on residential amenity. Noise and vibration monitoring to be incorporated into the program, however only to be undertaken during the construction as necessary.
  - d) A Dust Management Plan prior to demolition and construction in order to manage and where possible minimise the generation of dust.
  - e) A detailed Traffic Management Plan prior to construction, and includes a driver code of conduct for construction vehicles associated with the proposed works.
  - f) A Hazardous Material Management Plan prepared in accordance with all relevant requirements of Council, DECC and WorkCover.
  - g) An Erosion and Sediment Management Plan (ESMP) prepared and implemented and shall include, but not be limited to, details of control measures to ensure protection against sediment laden runoff during the construction.
10. All excavation works will be undertaken as per plans lodged with approved Construction Certificates and in accordance with all the relevant requirements of Council, DECC and WorkCover.
  11. The Proponent will undertake further assessment in regards to contamination as recommended in the assessment reports prepared by JBS Environmental, Preliminary Environmental Site Assessment Report September 2007 and Preliminary Environmental Site Assessment Report Stage 1 September 2007.
  12. Landscaping will be undertaken in accordance with the Landscape Masterplan as included in the Bonnyrigg Masterplan.
  13. The Proponent will ensure that all services remain uninterrupted to the estate during the construction stages.
  14. The Proponent will provide certification to the PCA confirming that all outdoor lighting complies with, where relevant, AS/NZ1158.3: 1999 Pedestrian Area (Category P) Lighting and AS4282: 1997 Control of the Obtrusive Effects of Outdoor Lighting.
  15. The hours of construction will be 7.00am to 6.00pm Monday to Friday and 8.00am to 1.00pm on Saturdays. No construction work shall be carried out on Sundays or Public Holidays.
  16. Notwithstanding the above restrictions to working hours, the proponent and/or the building contractor may apply to the Director-General to extend the working hours in certain circumstances, if required.

17. Notwithstanding the above restrictions to working hours, works and/or the delivery of goods works for emergencies (as required by the Police or any other authority) may be undertaken outside the specified working hours for safety reasons where people, equipment and/or properties are in danger. The extension of working hours may be undertaken (in case of emergency situations) provided that the proponent notifies the Department immediately, and explains the circumstances and reasons for extending the specified working hours, and the intended duration of the extension.
18. The Building Contractor will be responsible for maintaining the site and adjoining areas in full compliance with the OH & S Act 2000 and OHS Regulations 2001.
19. Prior to construction the Proponent is to determine the location and quantity of temporary construction offices and amenities. Temporary construction office and amenities on the site will be established in accordance with Work Cover requirements, Council requirements and authority approvals.
20. All materials, machinery and items associated with the construction will be contained within the site.



## APPENDIX F. PROPONENTS RESPONSE TO SUBMISSIONS

ITEM	ISSUE	DETAIL	RESPONSE REQUESTED	AUTHORITY	CONSULTANT	RESPONSE	COMPLETED
<b>URBAN DESIGN / DWELLING DESIGN</b>							
Density	Compliance with Metro Strategy and DCP	The proposed development does not meet Metro Strategy criteria and will result in dense urban development outside the 'walkable' distance to shops and the transitway	Focus density within 400m of transitway and shops	FCC	Urbis	The proposed Concept Plan focuses the higher density development within the Town Centre boundary (800m radii) and lower density development outside of the Town Centre boundary, which meets the objectives of the Metro Strategy. Approximately 1,800 dwellings will be located within the Town Centre boundary, which equates to about 40% of the dwelling target for Bonnyrigg Town Centre and is considered appropriate. Refer to the PPR for a detailed response.	Yes – no further response required
Dwelling Mix		Lack of one and two bedroom units in overall scheme and Stage 1 to meet tenure mix	Increase 1 and 2 bed dwellings	FCC (Independent Peer Review)	Urbis Billard Leece	The dwelling mix for Stage 1 is considered appropriate, based on the extensive work undertaken in association with the preparation of the application, including demographic analysis and market research. An appropriate range of dwelling types and sizes are provided to accommodate a variety of household types, including: <ul style="list-style-type: none"> <li>2 bedroom: 15 attached.</li> <li>3 bedroom: 59 attached.</li> <li>4 bedroom: 18 attached / 12 detached.</li> <li>5 bedroom: 2 detached.</li> </ul> The Concept Plan will be undertaken over 13 years and future stages will include a broader range of dwelling types, taking into account proximity to the town centre and transitway and current market conditions. Refer to the PPR for a detailed response.	Yes – no further response required at this time. Future stages to consider provision of 1 bed and 2 bed dwellings to meet tenure mix
Built Form	Lack of variety of building heights and built form	<ul style="list-style-type: none"> <li>Housing types reflect large townhouse developments which may appear overpowering</li> <li>Residential design is overly uniform and lacks any significant diverse built form or architectural features.</li> </ul>	Review housing designs	FCC (Independent Peer Review)	Billard Leece Rust	A detailed design review was undertaken by the proponent, in consultation with FCC, to address the comments made in the Peer Review and during the IHAP meeting. A revised set of architectural drawings have been submitted with the PPR, addressing each of the concerns raised regarding the built form of the proposal. Refer to the PPR for a detailed response.	Yes – revised architectural drawings for Stage 1 Project Application submitted with PPR
	Built form inconsistent with surrounding development	<ul style="list-style-type: none"> <li>Flats and units are out of style with surrounding homes, not enough space for each family.</li> <li>Not enough separate dwellings and shared walkways.</li> </ul>		Existing resident	Urbis	Plex-style dwellings are proposed to complement the built form of residential development in surrounding areas and meet both the density requirements for the renewal and market expectations. A variety of dwelling types are proposed for the various stages of the renewal scheme, taking into account proximity to services, transport and public open space. Stage 1 includes more attached dwellings due to the proximity to public open space. Stages 2, 3, 8, 9, 10 and 11 will include more detached dwellings in accordance with the Concept Plan. Refer to the PPR for a detailed response.	Yes – no further response required
	Building site coverage	Two storey built form results in increased site coverage and smaller open space areas to achieve higher density	Provide an urban form with a smaller building footprint	FCC	Urbis	The plex-style dwellings were selected to achieve the density in a more suburban form of development which is more consistent with the dwelling types in the surrounding area so that the site better integrates with the surrounding residential development and is suited to the local market. Lifted apartments to achieve increased density closer to the transitway are proposed in later stages of the development, in anticipation of increased demand for this type of housing in the future, to meet the changing needs of the ageing population. Refer to the PPR for a detailed response.	Yes - revised architectural drawings for Stage 1 Project Application submitted with PPR
Amenity	Amenity of plex dwellings / attached dwellings	A significant proportion of dwellings may not have adequate access to day/sunlight, ventilation and storage Construction materials and thermal performance	Design of the dwelling typologies should be reviewed to provide alternative options for providing a more consistent level of amenity	FCC	Billard Leece Advanced Environmental	A detailed design review was undertaken by the proponent, in consultation with FCC, to address the comments made in the Peer Review and during the IHAP meeting. Modifications to the plans include revisions to the siting and design of dwellings to improve their amenity, including: <ul style="list-style-type: none"> <li>Solar access/sunlight – dwellings have been reoriented and amended to optimise orientation and solar access outcomes for both internal and external living areas.</li> </ul>	Yes - revised architectural drawings for Stage 1 Project Application submitted with PPR

ITEM	ISSUE	DETAIL	RESPONSE REQUESTED	AUTHORITY	CONSULTANT	RESPONSE	COMPLETED
						<ul style="list-style-type: none"> <li>Cross ventilation – adequate cross ventilation is achieved in the plex-style dwellings as outlined in the Advanced Environmental memo dated 6 March 2008.</li> <li>Storage – internal layouts of dwellings have been amended to provide increased storage, where required.</li> </ul> Refer to the PPR for a detailed response.	
Internal Amenity	Internal room sizes and facilities	Bedrooms need to be spacious Sufficient bathrooms / toilets in larger homes Kitchens, bathrooms and toilets to be provided with appropriate ventilation	Range of minimum dimensions suggested, up to 4.5m x 4.5m, with ensuite and built-ins to main bed At least two for dwellings with two or more bedrooms. Separate toilet and bathroom recommended	Existing residents Fairfield Migrant Resource Centre	Billard Leece	Dwellings have been designed to meet the requirements of Housing NSW and expectations of the private market, with appropriately sized rooms and amenities. Two toilets are provided for the majority of dwellings.	Yes – no further response required
	Dwelling designs to take into account cultural issues	Front doors should not be in a straight line to back doors Kitchens need to be well ventilated Asian tenants would like veranda, awning and balcony to make home more attractive		Existing residents Fairfield Migrant Resource Centre	Billard Leece	Front doors and back doors do not run in a straight line to address feedback arising from the community consultation regarding feng shui principles. Kitchens will be ventilated to market and social housing requirements. Where natural ventilation is inadequate, additional mechanical ventilation will be provided. Detailed design reviews were undertaken with regard to the cultural needs of different groups, including extensive consideration of elevational treatments to meet the aspirations of the community. Dwelling specific design modifications shall be undertaken where required following social allocations or sales to private buyers. Refer to the PPR for a detailed response.	Yes – no further response required
	Air conditioning	Concerns regarding lack of AC, particularly for elderly people	Provide AC or ceiling fans, if AC not an appropriate alternative	Fairfield Migrant Resource Centre	Advanced Environmental	Thermal comfort studies have shown that the dwellings will be uncomfortably hot for less than 2% of the year with effective natural ventilation, as detailed in the dwelling design report.	Yes – no further response required
	Internal finishes	Non-carpeted floors preferred by most existing tenants		Fairfield Migrant Resource Centre	Billard Leece	Internal finishes will be determined during the construction certificate phase of the project and will be subject to community and market feedback.	Yes – to be resolved at CC
	Visual privacy	Minimum distance of 6m between habitable spaces is unacceptable	Review requirement	FCC (Independent Peer Review)	Urbis	The 6 metre distance separation is considered acceptable having regard to building height, the number of dwellings within each building, the local context and privacy impacts: <ul style="list-style-type: none"> <li>The plex-style dwellings are limited to a maximum of two storeys (with some third storey elements located where adequate building separation is achieved).</li> <li>Dwellings are primarily oriented to the street for passive surveillance reasons, which limits the overlooking of adjoining dwellings and private open space.</li> <li>Only a limited number of dwellings are located along a single side or rear boundary and windows are generally associated with lower activity areas, such as bedrooms, limiting the potential privacy impacts.</li> <li>Where required, screening devices, increased sill heights and other mitigation measures are proposed to avoid direct overlooking, which is considered appropriate and acceptable.</li> </ul> Refer to the PPR for a detailed response.	Yes -revised architectural drawings for Stage 1 Project Application submitted with PPR
	Acoustic performance of plex dwellings	Resistance from residents due to potential acoustic issues	<ul style="list-style-type: none"> <li>Windows and walls to be soundproofed</li> <li>First floor should be concrete rather than timber floorboard</li> <li>Kitchens in upstairs units should not be above bedrooms in downstairs unit</li> </ul>	Existing residents	Billard Leece Acoustic Logic	The acoustic performance of the plex dwellings has been designed to exceed the requirements of the BCA.	Yes – no further response required
	Concern regarding potential adaptability of housing and bathrooms for people with a disability	Dwellings with a bedroom downstairs include toilet facilities but no bathroom facilities	Review doorway and hall widths Provide bathroom facilities on ground floor	Bonnyrigg Public Tenants Group	Billard Leece	Dwelling Type 5 and Type 12 are adaptable dwellings with full bathrooms on the ground floor designed to the Australian Standards relevant to access for people with disabilities.	Yes – no further response required
External Amenity	Private open space	POS allocation is not acceptable for dwelling houses. Practical use of front semi private/private open space is	Review requirement. Review height/material for second screen fence to allow improved surveillance	FCC (Independent Peer Review)	Urbis Billard Leece	The POS areas provided for the dwelling houses proposed in Stage 1 are well in excess of the minimum requirement of 25m <sup>2</sup> , ranging from 30m <sup>2</sup> to 130m <sup>2</sup> . The current controls do not differentiate between multi-unit	Yes - revised architectural drawings for Stage 1 Project Application submitted

ITEM	ISSUE	DETAIL	RESPONSE REQUESTED	AUTHORITY	CONSULTANT	RESPONSE	COMPLETED
		questionable. Passive surveillance would not necessarily be achieved				dwelling and dwelling houses. If required, the minimum POS area for dwelling houses could be increased, however it is considered that the current control is considered appropriate as it provides appropriate flexibility for future stages, regarding access to POS, the needs/desires of future residents for POS and the like. A revised Fencing Strategy has been prepared, to provide for satisfactory levels of amenity to the external open space, while not compromising passive surveillance and the streetscape. Refer to the PPR for a detailed response.	with PPR
	Loss of private outdoor space	Incorporate very high standards of visual and acoustic privacy and other design measures to minimise neighbourhood conflict		Council of Social Service (NCOSS)	Billard Leece Rust	A number of measures have been proposed to provide adequate privacy and minimise neighbourhood conflict, including: <ul style="list-style-type: none"> <li>• Front fences to all residential properties to define lot boundaries and minimise opportunities for trespassing.</li> <li>• Landscaping and fencing treatments to provide semi-private open spaces in front setbacks, while maintaining opportunities for passive surveillance.</li> <li>• Separate ground floor entrances to the majority of dwellings, which are located to provide direct access from the street and avoid privacy impacts to adjoining and nearby neighbours.</li> <li>• Location of first floor living areas to avoid direct overlooking of neighbours' private open spaces.</li> <li>• Privacy screening and other measures, such as increased sill heights, to mitigate potential privacy impacts.</li> </ul> Refer to the PPR for a detailed response.	Yes - revised architectural drawings for Stage 1 Project Application submitted with PPR
	External storage space	External storage space of 1sqm is not acceptable	Review requirement	FCC (Independent Peer Review)	Billard Leece	External storage sheds will be 1.8m <sup>3</sup> (i.e. 1m wide x 1 m depth x 1.8m high) which is considered acceptable for storage of tools and outdoor equipment. Further, a detailed review of all internal and external storage was undertaken to identify opportunities for additional storage and in most cases additional storage has been included within the dwellings and the garage/carport, removing the 1sqm storage shed. In a few cases the storage shed has remained to fulfill the storage criteria. Refer to the PPR for a detailed response.	Yes - revised architectural drawings for Stage 1 Project Application submitted with PPR
	Landscaping	Some tenants do not like trees located close to their homes	Do not plant trees too close to houses	Existing residents Fairfield Migrant Resource Centre	EDAW	Trees have been placed well away from roof lines towards the rear of lots.	Yes – no further response required
Compliance with Planning Controls	Compliance with SEPP 65 Principles	<ul style="list-style-type: none"> <li>• Context - built form/scale.</li> <li>• Scale - 2 storey, homogenous.</li> <li>• Built form - not enough manipulation, differing building heights, architectural elements.</li> <li>• Density - satisfactory amenity standards of all dwellings.</li> <li>• ESD - refer to ESD below.</li> <li>• Landscaping - use of front semi private/private open space.</li> <li>• Amenity - sunlight access, privacy, sun shading, external storage, living room dimensions.</li> <li>• Safety/Security - surveillance.</li> <li>• Social Dimensions - dwell mix.</li> <li>• Aesthetics - choice of external colour and materials.</li> </ul>	Review design of overall development and housing design	FCC (Independent Peer Review)	Urbis Billard Leece	SEPP 65 does <b>not</b> apply to the proposal as none of the proposed buildings in Stage 1 comprise three or more storeys and four dwellings. However, each of the following issues has been addressed on a merit basis in the PPR. Future stages of the project will be subject to the provisions of SEPP 65 and a Design Verification Statement will be provided from a Registered Architect, addressing each of the above issues. Refer to the PPR for a detailed response.	Yes - revised architectural drawings for Stage 1 Project Application submitted with PPR
	Lack of consistency with FCC existing standards	Town Centre DCP and City Wide DCP not complied with	Review design of development	FCC	Urbis	The application of the current DCP controls will not achieve development that complies with the objectives of the Sydney Metropolitan Strategy or the Draft Subregional Strategy for the West Central Subregion or meets the dwelling density targets prescribed in these strategies. A draft amendment to DCP 28 has been prepared to reflect the approved Masterplan to ensure that any future development of the private lots are consistent with the development approved in the Concept Plan, Stage 1 Project Application and any future	Ongoing liaison to be undertaken with Council regarding the proposed DCP amendment

ITEM	ISSUE	DETAIL	RESPONSE REQUESTED	AUTHORITY	CONSULTANT	RESPONSE	COMPLETED
						development applications. A revised Masterplan is submitted with the PPR, taking into account the comments made by HERE architects, IHAP and FCC. Refer to the PPR for a detailed response.	
	Consent requirements for exhibition homes	Statement of Commitment for Concept Plan and Stage 1 Project Application, which do not require further approval for exhibition homes, are inconsistent with the Draft DCP, which proposes consent period to be extended to 3 years	All exhibition homes will be subject to a formal development approval	FCC	Urbis	It is acknowledged that development consent will be required for exhibition homes.	DAs to be lodged as required
Masterplan / DCP Review	Planning controls needs to be understandable and consistent to avoid future issues with privately owned lots	<ul style="list-style-type: none"> <li>Controls for third storey pop ups to be clarified.</li> <li>Solar access control to be clarified (including solar orientation in dwelling types to be reflected in solar access controls).</li> <li>80% building envelope to be explained.</li> <li>Setback controls for car parking to be consistent and avoid parking on pedestrian / cycle paths.</li> <li>80% max width for garages is unacceptable.</li> <li>Design guidelines for Precinct 2 should be included, as well as height controls.</li> <li>Retail floor area should be specified in Masterplan.</li> </ul>	Planning controls to be amended	FCC	Urbis	<p>The private realm provisions contained in the Masterplan have been reviewed with amendments made to ensure the controls provide clear and appropriate design controls for the proposed dwellings, specifically in relation to the following:</p> <ul style="list-style-type: none"> <li>Third storey elements.</li> <li>Solar access.</li> <li>Site coverage.</li> <li>Setbacks (including relating to car parking and pedestrian movement).</li> <li>Garage dimensions.</li> </ul> <p>The height of the proposed buildings in Precinct 2 is a sensitive issue, having regard to the cultural significance of the temple, as outlined in heritage report. However, the design of these buildings was not identified as an issue of significance and as such, it is not considered appropriate to provide specific design controls.</p> <p>A retail floor area will not be provided in the Masterplan and will be subject to future development application(s).</p> <p>Refer to the PPR for a detailed response.</p>	Yes – no further response required
	Discrepancies between EAR and on plan and discrepancies on the Stage 1 Project Application Plans.	<ul style="list-style-type: none"> <li>ES p(i) of EAR states 'mixture of one and two storey', however no single storey homes.</li> <li>Section 3.2.2 of EAR (Table 2) does not include 3 Attached.</li> <li>Site Analysis Plan is insufficient.</li> <li>North point on site analysis and plans is incorrect / questionable.</li> <li>Balconies and roofs are not shown on the shadow plans.</li> <li>No FSRs shown on plans.</li> <li>Fencing types do not correlate with Concept Plan / Masterplan.</li> <li>Inaccuracies with street elevation views (Lot 10, elevation 5).</li> </ul>	Review EAR for inaccuracies, review Site Analysis Plan and north points on all plans, review shadow plans, include FSRs on plans, review index of fencing types, review street elevation views for Lot 10.	FCC (Independent Peer Review)	Urbis Billard Leece	<ul style="list-style-type: none"> <li>It is acknowledged that all dwellings within Stage 1 are predominantly two storey in height, with some three storey elements.</li> <li>The revised breakdown of the Stage 1 dwellings is as follows: <ul style="list-style-type: none"> <li>Detached: 14</li> <li>2-Plex: 20</li> <li>3-Plex: 24</li> <li>4-Plex: 48</li> </ul> </li> <li>The Site Analysis Plan is considered sufficient and should be reviewed with the Bonnyrigg Masterplan which provides significant information with regard to the site context.</li> <li>The balconies and roof shadows have been included in the shadow plans prepared during the detailed design review.</li> <li>Lot sizes and building areas have been shown on each of the drawings for the single lots.</li> <li>A revised Fencing Strategy has been prepared and is included with the Project Design Report.</li> <li>The inaccuracies are addressed in the detailed design review.</li> </ul> <p>Refer to PPR for a detailed response.</p>	Yes - revised architectural drawings for Stage 1 Project Application submitted with PPR
	Alternative Housing Type Design prepared for 2 attached, 3 attached and 4 attached.	Alternatives show design rationale is able to be met while improving amenity		FCC (Independent Peer Review)	Billard Leece	<p>Detailed analysis of the alternative housing types was undertaken by Billard Leece and a comprehensive response addressing each of the proposals has been provided to FCC.</p> <p>A number of the issues raised have been addressed in the revised architectural drawings. The remaining issues are addressed by way of justification, having regard to the local site context, safety and security issues and site constraints.</p> <p>Refer to the PPR for a detailed response.</p>	Yes - revised architectural drawings for Stage 1 Project Application submitted with PPR



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	Building envelope lines	<ul style="list-style-type: none"> <li>Explain 80% building envelope.</li> <li>Spaces/uses should be indicated on Housing Type Plans.</li> <li>Incorrect referencing of dimensions on Housing Type Plans.</li> </ul>	Explanation required	FCC (Independent Peer Review)	Urbis Billard Leece	<ul style="list-style-type: none"> <li>Site coverage controls have been clarified in the updated Masterplan.</li> <li>Spaces/uses have been provided on Housing Type Plans.</li> <li>Plan referencing on Housing Type Plans has been corrected.</li> </ul>	Yes – no further response required
	Building footprint	75% building footprint cannot be achieved with minimum 35% soft landscaping area	Review requirement for minimum landscaping area	FCC (Independent Peer Review)	Urbis	Site coverage controls (including built area) have been clarified in the updated Masterplan.	Yes – no further response required
	Side and rear setback lines	Explain minimum 3m side setback and 4.5m minimum rear setback	Explanation required	FCC (Independent Peer Review)	Urbis	Setback controls (including relating to car parking and pedestrian movement) have been clarified in the updated Masterplan.	Yes – no further response required
	Minimum dimensions	Dimensions on Indicative Housing Type Plans do not conform to minimum dimensions under housing type provisions or 'Standard Element Guidelines'	Review Housing Type Plans and Standard Element Guidelines for inconsistencies.	FCC (Independent Peer Review)	Billard Leece	Inconsistencies on Housing Type Plans have been addressed.	Yes – no further response required
	Building Orientation Key (BOK)	Dwellings could be resited to improve northern orientation	Explanation required	FCC (Independent Peer Review)	Urbis Billard Leece	The dwelling design review included a detailed analysis of the orientation of the dwellings. There are a number of constraints with regard to achieving an optimal northern orientation, including the retention of the local road network, the existing private owners and the importance of passive surveillance of the public domain. However, the architectural drawings have been significantly amended to optimise the orientation, where appropriate. Refer to the PPR for a detailed response.	Yes - revised architectural drawings for Stage 1 Project Application submitted with PPR
Stage 1 Architectural Drawings		No differentiation between public and private		Bonnyrigg Public Tenants Group	Billard Leece	The drawings have intentionally avoided labeling the private and public dwellings so to achieve the aims of the SIA, including a lack of differentiation between homes and de-stigmatisation of social housing.	Yes – no further response required
		Lack of room sizes on the drawings		Bonnyrigg Public Tenants Group	Billard Leece	The drawings have been prepared to scale in accordance with standard accepted practice.	Yes – no further response required
		Clarification required regarding meaning of private lots in landscape drawings		Bonnyrigg Public Tenants Group	EDAW	The reference to 'private lot' is with regard to the light grey colour in the key used to identify footpath paving treatment within a lot boundary. A darker colour is used to identify the paving treatment of public areas (i.e. footpaths in road reserve).	Yes – no further response required
<b>SAFETY AND SECURITY</b>							
Passive Surveillance	Use of semi-private / private open space	Passive surveillance from living space/front yard may not be achieved with second 1800mm high screen fence (setback 3m from front boundary)	Review height/material for second screen fence to allow improved surveillance.	FCC (Independent Peer Review)	EDAW	A revised Fencing Strategy has been prepared and is included in the Project Design Report. The revised strategy will improve the streetscape and passive surveillance.	Yes – no further response required
	Location of front door	Main / front door should face road		Existing residents	Billard Leece	Front doors have been located to maximise visibility from the street, which may be achieved by other the front door facing the street or being located on the side, where a person entering the door is clearly visible from the street.	Yes – no further response required
	Access streets ('access places')	Lack of passive surveillance of access streets ('access places')	Provide windows overlooking service car parking	Bonnyrigg Public Tenants Group	Billard Leece	The dwellings adjoining the access places have been sited and designed to maximise passive surveillance of the access streets, including pedestrian access to dwellings, front door, living room and window placement, location of garages and fencing treatment.	Yes – no further response required
	Open space	Good natural surveillance provided in open spaces so children can play safely		Existing residents	Urbis	Agreed - the renewal scheme has maximised natural surveillance of public open space by the reconfiguration of the existing road network and orientation of dwellings to provide overlooking.	Yes – no further response required
Crime Prevention	Lighting	Insufficient lighting will lead to crime	Provide sufficient street lighting and lighting within open space	Existing residents Fairfield Migrant Resource Centre	EDAW	Desired lighting locations have been included in the Masterplan concept design. It is acknowledged that an appropriate balance is required with regard to lighting, so that lighting is not excessive to attract anti-social behaviour or have a detrimental impact on adjoining residents, while also providing appropriate lighting to achieve passive surveillance.	Yes – no further response required

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		Reserves that are unlit tend to be unsafe at night		FCC	EDAW	The playing fields will be lit as per the existing situation and lights switched off after hours. Lighting in the public domain will generally be kept to main roads and access ways. Where there are potential areas for vandalism, crime or antisocial activity in the public domain, there will be no (or limited) lighting in accordance with the recommendations contained in the CPTED Report.	Yes – no further response required
	Maintenance	Maintenance	Low levels of maintenance will not provide public amenity suggested in Masterplan and there is no strategy for higher level of upkeep. Intensive maintenance should be provided in VPA in the initial maintenance period	FCC	EDAW	Landscaping maintenance has been resolved as part of the VPA.	Yes – no further response required
	Dwelling security	Improve security on windows, doors and roofs to prevent theft	Want to provide security grilles on doors and windows, provide sensor lighting	Existing residents Fairfield Migrant Resource Centre	Becton	Dwellings have been designed to satisfy the principles of CPTED with appropriate lighting and dead locks, however security grilles will not be provided.	Yes – no further response required
		Windows should be higher and materials should be strong and hard to break	Windows on lower levels should be higher to prevent break and enter	Existing residents	Urbis	CPTED principles suggest a range of strategies to address crime prevention issues around ground floor windows including ensuring that there is effective passive surveillance from a number of perspectives to these windows. As such, raising the height of windows is not considered to be an appropriate strategy for crime prevention as this may impede vision for passive surveillance and further, ledges may provide a foothold to upper levels of a dwelling.	Yes – no further response required
	Letterboxes	Letter boxes should be lockable		Fairfield Migrant Resource Centre	Becton	Noted and accepted.	Yes – no further response required
	Pedestrian linkages	Pedestrian passageways will lead to delinquency and filthiness		Existing residents	Urbis	The Concept Plan provides for improved integration of vehicle, cycle and pedestrian movements to enhance natural surveillance and avoid under-utilised areas of land, as is the case with the Radburn design.	Yes – no further response required
	Maintenance and site security	Abandoned houses are attracting teenagers, with vandalism, noise disturbances and anti-social behaviour	Inspect vacant housing and provide additional security measures, move trouble makers away from Bonnyrigg	Existing residents	Becton	The management of tenants and vacant dwellings is not an assessment item for this application.	Yes – no further response required
<b>SOCIAL IMPACTS AND COMMUNITY SERVICES</b>							
Density Impacts	Impacts of increased density	Implications of increased population on facilities and services		Council of Social Service (NCOSS)	Urbis	The Social Impact and the Social Infrastructure Needs Analysis lodged with the Concept Plan satisfactorily address this issue. Potential impacts have been identified and where relevant, measures identified to mitigate impacts.	Yes – no further response required
		Impact of increased population on schools		Existing residents	Urbis	A representative from the Department of Education and Training attended the Planning Focus Meeting and responded positively to the proposed renewal of the estate. The school population has been declining and increased population, along with a more diverse demographic will also be valued by the local schools. They look forward to increased enrollments as a result of the project.	Yes – no further response required
		Increased density may exacerbate neighbour conflict		Sydney South West Area Health Service	Urbis	The proposed development has been designed to minimise opportunities for neighbourhood conflict, including appropriate boundary treatments (fencing/landscaping), driveway location, car parking and the like. Further, extensive consideration has been given to the internal and external amenity of individual dwellings and the additional amenity provided by the public domain improvements.	Yes – no further response required
		Reduction in dwelling size / private open space	Increase size of dwelling / provide larger backyards	Sydney South West Area Health Service Fairfield Migrant Resource Centre Existing residents	Urbis	The Concept Plan includes a range of dwelling types and private open space areas to cater for the different and changing needs of the community. Many residents eschewed their need for greater outdoor private space in community consultation, while others expressed a desire to have larger areas for pets, bbqs and the like. Further, public open space areas have been significantly enhanced as a result of the proposal to provide more passive and active recreation opportunities	Yes – no further response required
Affordable Housing		Home purchase is unachievable for most households in the region	NGOs (incl NCOSS) be consulted during development of Affordable Housing Strategy	Council of Social Service (NCOSS)	Becton	An Affordable Housing Strategy is being prepared in association with the renewal project and it is anticipated that comment may be sought from relevant stakeholders, where considered appropriate	Affordable Housing Strategy to be provided to Council

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						and necessary.	
Housing Allocation and Tenure Mix	Housing allocation and tenure mix is outside of scope of assessment under EPAA 1979	Local allocations to be considered in context of Housing NSW role in social housing.	Conditions of approval should not limit Housing NSW ability to deliver social housing	Housing NSW	Housing NSW	Housing NSW correspondence dated 17 January 2008 and submitted to Council states that conditions should not be imposed that have the potential to interfere with allocation of social housing in accordance with Housing NSW policies.	Yes – no further response required
	Reduction in social housing in LGA.	134 replacement dwellings will need to be sourced outside Bonnyrigg. FCC considers there should be no reduction in social housing in LGA	Maintain all 833 public housing dwellings in Bonnyrigg or provide 134 replacement dwellings within Fairfield / Liverpool	FCC Council of Social Service (NCOSS)	Housing NSW	Housing NSW correspondence dated 17 January 2008 states that there may be a slight loss of social housing in Fairfield, however, this is consistent with Housing NSW long term asset plan and any loss will be offset through Housing NSW supply program for Fairfield LGA.	Yes – no further response required
	Housing needs for social housing tenants	Existing residents have made requests for specific types of housing and facilities, location of housing and allocation within specific stages	Various requests for specific types of housing to suit tenant needs (eg detached housing, single level dwelling, air conditioning, large rear yard, etc)	Existing residents	Housing NSW	Housing NSW allocation of social housing is outside the assessment provisions of the EP& A Act and will be addressed in accordance with Housing NSW policies, including provision of accommodation for people with special needs.	Yes – no further response required
	Location of social housing	Social housing for elderly, disabled and mental illness currently located between Plaza and playing field in the plans. Alternate location still close to Plaza and transport but not so noisy	Consider location	FCC Council of Social Service (NCOSS) Sydney South West Area Health Service	Urbis	No specific location has been identified for high needs social housing. Adaptable and accessible dwelling types will be provided across the renewal area, with higher density living closer to the town centre and transitway due to proximity to services. The acoustic report provides glazing requirements for achieving appropriate levels of internal acoustic amenity for all dwellings.	Yes – no further response required
		Concerned that seniors housing is too far away (Stage 12)	Create the seniors complex earlier	Existing residents	Urbis	Adaptable and accessible dwelling types will be provided various stages, which will be appropriate for people with specific needs, such as the elderly or people with mobility issues.	Yes – no further response required
		Avoid clusters of social housing in transport-poor locations. Clusters proposed around creek line and at distance from transport and shops		FCC	Urbis	Housing NSW allocation of social housing is outside of the EPAA assessment provisions and will be addressed in accordance with Housing NSW policies. Social housing will be dispersed across the site to avoid clusters.	Yes – no further response required
		Housing NSW requires control of whole buildings, which makes location of public housing a sensitive issue		FCC	Housing NSW	Housing NSW allocation of social housing is outside the EPAA assessment provisions and will be addressed in accordance with Housing NSW policies. Housing NSW control of whole buildings is required to minimise potential conflicts between residents and provide for ease of maintenance and the like, which is considered entirely appropriate.	Yes – no further response required
	Indistinguishability	Social and private housing should be indistinguishable. Difference in internal design, room size, etc		FCC	Billard Leece	There is no external distinction between public and private dwellings. There may be internal differences in layout and finishes, however, this will not be discernible from the public domain and is considered acceptable.	Yes – no further response required
Impacts on Existing Tenants	Relocation impacts	Consider impact on existing public households in Bonnyrigg - relocation will involve disruption	Additional measures to mitigate adverse impacts proposed in SIA be incorporated into plans	Council of Social Service (NCOSS)	Housing NSW	Housing NSW allocation of social housing and compensation to existing tenants is outside of the EPAA assessment provisions and will be addressed in accordance with Housing NSW policies.	Yes – no further response required
		Compensation is considered to be insufficient	Housing NSW should subsidise tenants who move out of Bonnyrigg.	Existing residents	Housing NSW	Housing NSW allocation of social housing and compensation to existing tenants is outside of the EPAA assessment provisions and will be addressed in accordance with Housing NSW policies.	Yes – no further response required
		Moving house will be a costly and difficult exercise, particularly for tenants with mobility issues	Tenants with a disability or elderly tenants should have only one move to minimise potential hardship	Existing residents	Housing NSW	Housing NSW allocation of social housing and compensation to existing tenants is outside of the EPAA assessment provisions and will be addressed in accordance with Housing NSW policies.	Yes – no further response required
		Stress associated with relocation		Sydney South West Area Health Service	Urbis	Housing NSW allocation of social housing and compensation to existing tenants is outside of the EPAA assessment provisions and will be addressed in accordance with Housing NSW policies.	Yes – no further response required
	Construction impacts	Dust during construction period		Existing residents	Hughes Trueman	Construction Management Plans for the Concept Plan and Stage 1 Project Application were prepared and submitted with the application to address potential construction impacts and mitigation measures. It is noted that the CMPs have been reviewed by Council and found to be satisfactory.	Yes – no further response required
		Means for public to view complaints during construction and action taken to mitigate or address.	Provide project website or through community liaison group	FCC	Becton	Construction Management Plans for the Concept Plan and Stage 1 Project Application were prepared and submitted with the application to address complaints management procedures. It is noted that the CMPs have been reviewed by Council and found to	Ongoing liaison to be undertaken with community during renewal process

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						be satisfactory. It is noted that Bonnyrigg Partnerships will manage a complaints register for the entire construction programme.	
	Health impacts	HIA issues addressed in SIA, with range of positive and negative impacts identified in assessment	SSWAHS Population Health wishes to be involved in project and participate in expert advisory committee and monitoring	Sydney South West Area Health Service	Becton	Becton and Bonnyrigg Partnerships have continued to liaise with SSWAHS during the assessment of the Concept Plan and it is intended that consultation would continue to ensure that relevant matters are identified and resolved.	Ongoing consultation to be undertaken with SSWAHS
	Social impacts	Concern about residents as 'outsiders' with new social mix.		Sydney South West Area Health Service	Urbis	This issue has been assessed at length in the Social Impact Assessment and it is considered that the benefits of redevelopment outweigh the impacts and specific strategies are proposed to maximise the benefits of social mix. It is noted that public and private housing will be indistinguishable in design throughout each precinct so that one particular home type does not become more associated with public households.	Yes – no further response required
Community Centre	Design	Conceived as spaces and office accommodation. Insufficient specification of range of uses will result in inadequate design and fit out. Proposal for flexible spaces is inadequate	Provide a clearly designated purpose with flexible and programmable spaces, including well equipped spaces with dedicated uses (e.g. classroom space with broadband connection). Contain spaces for playgroups and programme delivery such as parenting programmes and wet spaces for art activities.	FCC	Becton	This has been resolved as part of the VPA. It is considered that the space provided in the community centre will be adequate for all the agreed uses. The overall design will be agreed with FCC. The assessment of the uses to be located in the centre will be agreed with Council and the design will be flexible and adaptable to accommodate those uses.	Yes – no further response required
		Maximise budget by taking utilitarian approach to structure, fittings and finishings to provide up-to-date requirements such as soundproofing, broadband, etc	Provide broadband connection, AV equipment, sound recording equipment in a dedicated recording studio.	FCC	Becton	This has been resolved as part of the VPA. It has been agreed with FCC that sound recording facilities will not be provided as it is above and beyond what is considered reasonable for the proposed development.	Yes – no further response required
	Location	Community centre is located too far away from shopping plaza and primary school, two or three bus stops away and in the middle of the residential area, which could cause conflicts	Relocate very close to the shopping centre or primary school	FCC	Becton	This issue was addressed at the Council meeting on 12 February 2008 and it was agreed that the currently proposed location was appropriate and relocation is not required.	Yes – no further response required
	Facilities	Include at least one retail or commercial premises within the building to provide an income for management of the community centre	\$1.35m identified for commercial centre should be redirected to community centre	FCC	Becton	The retail and commercial facilities proposed within the Bonnyrigg Neighbourhood Centre do not form part of the proposed community centre or the VPA and are considered appropriate to provide for the local convenience needs of residents, while avoiding significant impacts on the plaza and town centre.	Yes – no further response required
	Management	Ongoing management of centre	Provide for facility manager	FCC	Becton	This has been resolved as part of the VPA.	Yes – no further response required
	Accessibility	Be accessible to people with a disability and people on low incomes	It should not be an icon of new wealth but an icon of shared opportunity characterised by functionality, soundness and good equipment	FCC	Becton	The proposed community centre will be designed to cater for all users, including people with mobility issues, parents with prams and the like. The proposed centre will be designed to cater for the community, including both existing and future residents.	Yes – no further response required
Commercial Services Centre	Location of tenancy management activities	Two locations are proposed for tenancy management activities, including plaza and multi-purpose centre, suggesting that one will be a sales office	New facilities, rather than the sales office, will be excellent	FCC	Becton	The assumption made is incorrect. The existing tenancy management facilities in the plaza are temporary and will be relocated to the Bonnyrigg Neighbourhood Centre upon completion of construction of the relevant stage.	Yes – no further response required
	Economic impact	Proposal does not take upgrade of Bonnyrigg Plaza into account and proposed convenience store will not be a social benefit based on the goods sold	Redirect the \$1.35m in the VPA to the construction of a first class, modern community centre in an appropriate location	FCC	Becton	The assumption made is incorrect. The retail and commercial facilities proposed within the Bonnyrigg Neighbourhood Centre do not form part of the VPA. Further, the provision of limited facilities within walking distance of all residents, including those on the eastern portion of the estate, is considered appropriate to provide for the local convenience needs of residents, while avoiding significant impacts on the plaza and town centre.	Yes – no further response required



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Community Services	Retention of existing services	Guides building constructed on Housing NSW land by Guides and Council and needs to be replaced with dedicated space for Guides and supported playgroups		FCC	Becton	Girl Guides will be relocated to the new community centre proposed located towards the centre of the estate.	Yes – no further response required
	Community groups	Cambodian Welfare, Vietnamese Womens Association, Mens Sheds, Benevolent Society and Disability South West are currently located on estate and need to be relocated in appropriate accommodation.	Separate accommodation in or not in community facility	FCC	Becton Urbis	The Mens Sheds, Cambodian Australian Welfare, Vietnamese Women's Association, the Benevolent Society and Disability South West will continue to be accommodated within the estate for the immediate period and re-housed into the proposed Bonnyrigg Neighbourhood Centre. It is noted that the accommodation of service providers on the site will be evaluated throughout the project as these are likely to change depending upon specific needs. The new community centre will be designed to accommodate a variety of uses and tenants including the Mens Sheds or other necessary uses.	Yes – no further response required
		Council's Child Care Centre at Tarlington should be replaced, having regard to affordability and need for community based service	Replacement of purpose built children's service to Council	FCC	Becton Urbis	It should be noted that the SIA found that there is no requirement for a child care centre.  At the meeting with Fairfield Council officers on 19 March 2008, it was agreed that there is a need for further work to be undertaken on the projected demography of families with children in Bonnyrigg which would affect the centre at Tarlington and the proposed Child Care Centre in the Bonnyrigg Neighbourhood Centre.  This has been resolved as part of the VPA.	Yes – no further response required
	Other children's services	Shortfall in services for children, particularly health services	Consider development of facilities for children's health services and supported playgroups service	FCC	Becton Urbis	It should be noted that the SIA found that there is no requirement for additional services for children.  This has been resolved as part of the VPA.	Yes – no further response required
	Youth services	Require support for Youth Centre and other facilities for young people in estate including 8-12 year olds.	Renovations and staffing of Youth Centre, skate facilities, sports and recreation space	FCC	Becton Urbis	Bonnyrigg Partnerships has provided a proposal to support coordination of youth programs offered. This is the subject of ongoing discussion between Becton, Bonnyrigg Partnerships and FCC and has been resolved as part of the VPA.	Yes – no further response required
		Inadequate youth services for civic and cultural participation in 21 <sup>st</sup> century, such as AV equipment, broadband, darkrooms, recording studio. Proposed funding of youth worker for three years considered short timeframe.	Robust and imaginative provision for young people utilising the opportunities available in services to be provided	FCC	Becton Urbis	Bonnyrigg Partnerships has provided a proposal to support coordination of youth programs offered.  This has been resolved as part of the VPA.	Yes – no further response required
	Seniors services	Provide a retirement village area with a small community hall / area		Fairfield Migrant Resource Centre	Becton	Provisions for seniors housing and community facilities should adequately address this concern.	Yes – no further response required
	Library services	Council does not run mobile library services and does not support this proposal. Existing library currently in ideal location but too small.	Currently the proposed location for the community centre would not facilitate complementary services run from the Branch library at Bonnyrigg	FCC	Becton Urbis	While FCC does not currently support the concept of a mobile library, these can be effective as a community building tool, particularly if residents take on the administrative role voluntarily (e.g. the community of Gwandalan in Wyong, NSW). This approach, together with a proposal for an IT resource and reading room (JSA SIA report, p 139) would also appear to be a solution to Council's current problem of inadequate floorspace at the Bonnyrigg Branch Library. The Library issue is now being discussed in the context of potential Plaza redevelopment.	Yes – no further response required
		Contribution to redevelopment of library is underestimated	Primary population of 6,032 would be 304sqm, which would have an estimated cost of \$945,622	FCC	Becton	The proposed calculation undertaken by Council does not include a credit for the existing population of the site. The proposed contribution to the library in the VPA is considered appropriate on this basis.	Yes – no further response required
Community Garden	Mitigation	Community garden does not compensate for loss of private open space as it is not private space, access is limited, rules will apply, mental health issues, distance separation and potential	Gardening requires private open space or provision of secure space for allotment style gardens.	FCC	EDAW	The community garden is proposed to be in the form of a secured allotment style garden with adequate and secure storage for tools. There are many positive impacts of a community garden as outlined in the SIA which include enhancing the sense of pride and ownership of the area by residents and assisting residents to adjust to a change in living arrangements. The community garden	Yes – no further response required

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		vandalism				is proposed to be accommodated in the Bonnyrigg Neighbourhood Centre to enable existing residents to retain plants with sentimental value and enable residents to grow their own vegetables/produce.	
	Demand	No evidence of demand for community gardens.	VPA should require research for demand assessment among public housing tenants	FCC	EDAW	The SIA and community consultation undertaken in association with the Concept Plan has addressed the demand for the proposed community garden.	Yes – no further response required
	Plant nursery	No evidence that an experienced nursery grower would be interested in on site nursery. There is currently a Fairfield Council site nursery.		FCC	EDAW	The site nursery will be run with the help of a local experienced grower (Andreason's Nursery). The Masterplan lists each of the key objectives for the proposed nursery which have been developed with Andreason's Nursery.	Yes – no further response required
Outstanding Documentation	Plans cited in SIA have not been provided / viewed	Affordable Housing Strategy, Community Renewal Services Plan, Employment and Training Strategy, Rehousing Strategy	Mitigation of potential impacts and project outcomes refer to these documents - not submitted.	FCC	Becton	A Community Renewal Services Plan (including an Employment and Training Strategy) has being prepared and is submitted with the PPR. An Affordable Housing Strategy and Rehousing Strategy are being prepared and will be issued to Council following the submission of the PPR.	Yes – no further response required
<b>OPEN SPACE AND RECREATION</b>							
Open Space	Reduced amount per person on estate	Reliance on adjoining open space to accommodate for shortfall in open space. Estate population increasing and private and public provision of open space decreasing. Proposed open space will not be able to cope with new demand.		FCC	Urbis	The Social Infrastructure Analysis clearly articulates the potential impact of the Concept Plan, having regard to the rationalisation of the existing open space, the significant embellishment works to be undertaken to enhance the existing open space and the potential impacts of the increased population. The proposed open space is considered acceptable as it meets the quality, accessibility and equity recommendations. Each recommendation is addressed in Stage 1 and will continue to be addressed in future stages.	Ongoing review of recommendations in future stages
		Facilities will not only be used by community of estate.		FCC	Urbis	It is acknowledged that facilities, including the soccer fields and embellished open space, may be used by residents that do not live on the estate. Stage 1 has been designed to maximise on-street car parking adjacent to the open space to accommodate visitors, with 61 spaces along Road 1 (realigned Bunker Parade). The remaining open spaces are of a more local scale, making them less likely to attract visitors arriving by car.	Yes – no further response required
		No net loss of usable space. Do not include green corridors and riparian corridors in open space calculations.		FCC	EDAW	There are no 'green corridors' or 'riparian corridors' proposed in the Masterplan. Any loss of 'usable' open space will be offset by provision of quality usable open space which also serves an ecological function in some instances.	Yes – no further response required
		Provision of playground facilities at St Johns Park reserve.		FCC	Becton	The provision of playground facilities at St Johns Park reserve is not required. The proposed open space is considered acceptable as outlined above.	Yes – no further response required
	Hierarchy of open space	Definition of hierarchy of parks required.		FCC	EDAW	The hierarchy of parks is included within the Masterplan.	Yes – no further response required
	Connections	Connect estates adjoining open space to proposed pedestrian and cycle paths.		FCC	EDAW URBIS	Pedestrian and bicycle connections have been included in the Masterplan which link the estate with adjoining and surrounding infrastructure.	Yes – no further response required
Sporting Facilities	Soccer fields	Council preference is 2 full size competition soccer fields in Park 2 rather than 2 junior informal soccer fields within estate. The proposal requires an audit of existing and proposed formal sports playing fields.		FCC	EDAW	The current estate does not include two full-size fields and as such, there will be no loss of sporting facilities. The Masterplan includes a list of all recreational and sporting facilities to account for loss of open space and a user/park ratio to enable comparison with current status.	Yes – no further response required
		Prefer junior soccer field is split between Stage 1 and 2 works		FCC	EDAW	The junior soccer field will be constructed as part of Stage 2.	Yes – no further response required
		Prefer two fields to stay side-by-side		Soccer club	EDAW	Overall the benefits arising from the reconfiguration of the open space, including improved passive surveillance, improved play facilities and improved pedestrian and vehicle connections, outweigh any potential negative impacts.	Yes – no further response required
		Main field to be 100m x 70m, secondary field to be 100m x 50m, fencing to be min 3m away, 5m separation between fields		Soccer club	EDAW	The main field is 100 x 70m with a minimum 3m perimeter buffer zone. The junior field will be 84m x 56m. The fields are 26m apart. These fields match or exceed the current facilities on the site.	Yes – no further response required

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		Amenities to have referee room with shower/toilet, home and away dressing rooms with showers/toilets, canteen and public toilets		Soccer club	Becton	An amenities building that includes facilities as required by Council will be provided.	Yes – no further response required
	Basketball courts	Proposed to remove full size basketball court and replace with 1/2 court.		FCC	EDAW	The court will be impacted by the proposed Masterplan. Half will be retained and resurfaced. It is considered that significant alternative embellishment will compensate for reduction in size of this basketball court.	Yes – no further response required
	Tennis wall	Tennis wall - concerned with high maintenance. Vandalism. Not necessary.		FCC	EDAW	The proposed tennis wall is planned to become a canvas for community arts project and a relatively low maintenance piece of sporting infrastructure. It is noted that there are significant sporting benefits associated with tennis walls such as providing opportunities for skilled training. Further, it is considered important to provide a range of sporting facilities for the community.	Yes – no further response required
	Skate facilities	Skate facilities not necessary. Make surfaces skateable. Urban skate equipment.		FCC	EDAW	An existing skate facility is located nearby at Clear Paddock Creek and it is not considered appropriate to direct funds towards an additional facility in this location. The proposed parks include hard stand areas which may be suitable for skate surfaces, however, it is important to manage the amenity needs of adjoining residents as well as skaters to minimise potential conflicts.	Yes – no further response required
Play Facilities and Open Space Infrastructure	Age groups	Mix facilities in park so small children and teenagers can use		Existing residents	EDAW	The Program Analysis Plan contained in the Masterplan clearly demonstrates the provision of facilities for small children, older children and teenagers. It is considered desirable to separate small children and older children to avoid conflicts, while providing facilities for both groups within reasonable proximity of each other to enable parental surveillance.	Yes – no further response required
		Playgrounds cater primarily for younger age groups. Need playgrounds for 5-12 age group. Playgrounds need to be fenced. Horse shoe fencing to be considered.		FCC	EDAW	Landscape Plans currently cater for all age groups. It is Council's practice not to fence playgrounds. Refer to Program Analysis Plan included in the Masterplan. Playgrounds are consistently positioned at sufficient distances from roads and have parental viewing areas between playground and roads. The strategic positioning of playgrounds has been based on the Recreational Needs Study.	Yes – no further response required
	Park furniture	Placement of park furniture and playgrounds near residences can be problematic (i.e. antisocial activity).		FCC	EDAW	The design of parks (and placement of park furniture) will be further refined as part of design development which will be submitted as a separate DA.	Yes – no further response required
		Use standard furniture for ease of maintenance and replacement.		FCC	FCC EDAW Becton	At the appropriate stage, Council will be requested to provide details of standard furniture used in Fairfield LGA for Bonnyrigg Partnership to review and liaise with Council Assets Recreational Officer with regards to selection of play equipment. This can be resolved as part of future DAs for specific parks.	Yes – no further response required
	Bubblers	Water bubblers usually damage quickly. Not recommended.		FCC	EDAW	Bubblers are to be located in highly protected and visual areas and are considered to be an appropriate inclusion within public open space. Durable and off shelf products will be specified for easy maintenance.	Yes – no further response required
	Bollards	Bollards make mowing operations more difficult. Use trees in groups.		FCC	EDAW	Parks 1-3 have 1:4 turf batters. Remaining parks are to have a combination of strategically placed grouping of trees/shrubs and bollards in 'no mow zones'.	Yes – no further response required
	BBQs	Provide BBQ at district park level only.		FCC	EDAW	BBQ facilities are to be provided in Valley Park and Hill Top Park only.	Yes – no further response required
Lighting	Sports fields	Provide floodlighting in sports fields only. No lighting in parks.		FCC	EDAW	Currently lighting will be provided to main commuter routes only and will be set on a timing device. The Park drawings in the Masterplan have been updated to show desired locations for lighting.	Yes – no further response required
		Training floodlights 100lux, night games 150 lux		Soccer club	Vision	Appropriate lighting will be provided, taking into account the needs of both users of the facilities and potential impacts on nearby residents.	Yes – no further response required

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	Antisocial behaviour	Lighting to structures will attract antisocial behaviour.		FCC	EDAW	Lighting to structures will not be provided and have been removed from landscape plans submitted with the PPR.	Yes – no further response required
Shade Structures	Shade structure to be incorporated	Structures are too small to provide shade for more than a few people.	All children's play equipment should be under shade. Priority should also be given to protection for children and older people at other key locations, including bus stops and beside sports fields. Shade structures should provide a pleasing aesthetic in the landscape, be highly functional for foreseeable climate conditions and demonstrate intention to make provision for wellbeing of residents	FCC	EDAW	Shade structures have been incorporated into key locations including BBQ facilities and within parks, as outlined in the Masterplan. Appropriate tree planting can be provided to meet relevant standards, with groups of trees (including existing trees) to provide canopy shade in playgrounds. Detailed design guides for shade structures in playgrounds, including safety assessment (e.g. climbing) and material selection (e.g. graffiti), have been provided in the Project Design Report submitted with the PPR. Bus shelters (selected from off shelf product) will be provided along Bunker Parade and Tarlington Parade. Refer to Shade Structure Plan in the Masterplan. The existing concept sketches are to be further refined at the detailed design stage, addressing the possibility of incorporating shelters into the public art strategy as part of future DAs.	Yes – no further response required
Waste Management	Rubbish bins	Minimise rubbish in parks and streets	Provide more bins	Existing residents	EDAW	The Furniture Plan in the Masterplan has been updated with bin locations and images. Bins will be provided in accordance with Council's standard requirements.	Yes – no further response required
Pet Management	Off-set reduction in private open space	Reductions in both private and public open space for pet management do not appear to have been considered	Provide for fenced, off-leash dog exercise areas across the site. Provide a contribution towards the provision of signage and dog waste collection bins	FCC	EDAW	It is proposed that the temporary car park will act as fenced off dog park. Provision for a dedicated fenced off dog area has been discussed as part of the VPA and it has been agreed that there is not adequate justification or need for it.	Yes – no further response required
Amenities Building	Facilities	No change room and toilet facilities currently provided	Provide amenities block and change room	Local resident	EDAW	An amenities building is proposed to be provided, including change room, showers and toilet facilities.	Yes – no further response required
	Social impacts	Loitering, graffiti and damages arising from current walkway and location of amenities building will add to problems, including sewage and rubbish odours	Relocate away from existing dwellings in Louise Place	Private owners (Louise Place)	EDAW	The amenities building has been located adjacent to the car park to provide for passive surveillance.	Yes – no further response required
	Car parking	Proposed car park next to Louise Place will increase traffic flow to Louise Place, cause accidents and create noise pollution	Relocate car park to Edensor Road	Private owners (Louise Place)	EDAW	There will be no increase in the number of playing fields or car parking spaces and as such, it is considered unlikely that the proposed car park will increase traffic flows, accidents or noise pollution.	Yes – no further response required
Public Art	Provision	Avoid one off stand alone item. Build art and good design into projects (park shade structures, infrastructure elements)	Strategies to engage the community in the arts creation process to be included in public art plan.	FCC	EDAW	Each of the issues identified by Council has been addressed in the Public Art Strategy which will be provided prior to issue of Construction Certificate.	Yes – ongoing liaison with community built into strategy
	Funding	Budget appears to be insufficient for processes and number of installations proposed	Arts strategy with adequate funding levels and community involvement to be included in VPA	FCC	Becton	The funding of public art is provided to supplement other funding, such as funding for open space.	Yes – no further response required
	Community diversity	Public art spaces in community to reflect community diversity		Existing residents	EDAW	Public Art Strategy includes community input and community diversity objectives.	Ongoing liaison with community built into strategy
Management and Maintenance	Plans of Management	Plans of management are to be completed for all open space areas within estate.		FCC	Becton	In accordance with Council policy, FCC will prepare a standard Plan of Management following dedication of the land for open space.	Yes – no further response required
	Mowing	Concerned about tight corners on structures, play equipment, garden beds, trees for maintenance reasons.			EDAW	Further detail will be provided in design development and construction documentation.	Yes – no further response required
Staging	Park Staging Plan				EDAW	A staging plan of parks and assets has been included in the Project Design Report.	Yes – no further response required
<b>TRANSPORT AND TRAFFIC</b>							
TMAP	Insufficient detail in TMAP	TMAP does not address the directions of the State Plan, Urban Transport Statement and State Infrastructure Strategy.	Need to address these strategies in the TMAP - in particular, how the proposal can achieve consistency with the directions of the State Plan for reduced journey to work trips by private vehicles	MOT	SKM	Each of these strategies has been considered, having particular regard to the opportunities to reduce reliance on the private motor car. Refer to Section 3 of the updated TMAP submitted with the PPR.	Yes – no further response required



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		TMAP does not review the objectives and requirements of the Draft Interim TMAP Guidelines	Amend TMAP to incorporate the Draft Interim Guidelines	MOT	SKM	This has been addressed in Section 4.1 of the original and updated TMAP report which responds to the objectives of the Draft Interim Guidelines.	Yes – no further response required
		TMAP should identify those organisations which are responsible for achieving the nominated package of transport measures	TMAP needs to identify organisations responsible for achieving the nominated package of transport measures	MOT	SKM	The responsible funding agent for each of the measures proposed to increase public transport mode share is described in Table 9.1 of the updated TMAP submitted with the PPR.	Yes – no further response required
		All supporting data and calibration should be provided.	Information to be provided	FCC	SKM	The Paramics Modelling Report is included as Appendix A of the updated TMAP submitted with the PPR.	Yes – no further response required
	Mode Shift	The statement that TMAPs universally aim to achieve a 10% modal shift away from private vehicles is not supported	MOT recommends that a maximum mode shift to public transport is achieved and justified through detailed modeling	MOT	SKM	Additional information has been provided to articulate and justify the proposed mode shift to public transport. Refer to Section 4 of the updated TMAP submitted with the PPR.	Yes – no further response required
		TMAP confuses objectives of a TMAP with targets to be achieved.	Public transport patronage must be analysed in terms of 'Journey-to-Work' trips and other trips, and depending on services provided. TMAP needs to test sensitivities for the development area.	RTA	SKM	Additional information has been provided on 'Journey-to-Work' and other trips. Refer to Section 4 and Section 6 of the updated TMAP submitted with the PPR.	Yes – no further response required
		Not enough justification to demonstrate how future travel demand and trip distribution can support a 50% increase in mode share to public transport	Adequate justification required	MOT	SKM	Measures to improve mode shift and the responsible funding agent for each of the measures are described in Table 9.1 of the updated TMAP submitted with the PPR.	Yes – no further response required
		The TMAP does not address the causal link between car parking supply and mode share to public transport.	Causal link needs to be addressed in TMAP.	MOT	SKM	Reduced parking was considered as one of the measures to improve mode shift (see Table 9.1 of the updated TMAP). The impact of parking on mode shift is described in Section 9.3 of the TMAP submitted with the PPR.	Yes – no further response required
		TMAP only provides a desktop overview of Travel Demand Management (TDM)	TMAP should provide a review of key approaches relevant to Bonnyrigg and likely to achieve mode shift in favour of public transport.	MOT	SKM	Measures to improve mode shift and the responsible funding agent for each of the measures are described in Table 9.1 of the updated TMAP submitted with the PPR.	Yes – no further response required
		Report relies heavily on the current policy and proposals which are based on existing patronage	TMAP needs to test any new strategy which may assist in achieving/not achieving the suggested target	RTA	SKM	Measures to improve mode shift and the responsible funding agent for each of the measures are described in Table 9.1 of the updated TMAP submitted with the PPR.	Yes – no further response required
		Not achieving Public Transport targets affects provision of other infrastructure. Parking supply in development based on mode shift to use of public transport	Increase parking provision rate to current Council policy requirements and ensure increased road capacity (including intersections) provided within and external to redevelopment to accommodate increased traffic flows or provide legally binding guarantee with heavy penalties re mode shift through VPA	FCC	SKM	The Paramics model forecasts were based on standard trip generation rates and the rates were not reduced to reflect increased mode share. As such, a worst case traffic scenario has been prepared.	Yes – no further response required
	Public Transport and Bus Services	A number of statements in the TMAP refer to the reduction / elimination of local bus services - this pre-empts the outcomes of the Integrated Network Planning process for bus contract 3 which is nearing completion.	Remove statements from the TMAP	MOT	SKM	The comments made by MOT are acknowledged. The updated TMAP makes no reference to reducing or eliminating local bus services and includes the MOT Level of Service guidelines.	Yes – no further response required
		MOT currently reviewing services and may not provide service through estate.	Developer to fund additional services until MOT takes over	FCC	SKM	Bonnyrigg Partnerships in close liaison with FCC will continue to consult with MOT on future bus routes, frequencies and operating hours. However, it is inappropriate to propose for Bonnyrigg Partnerships to undertake any funding of services, particularly when MOT has not yet undertaken any consultation or public notification of future services.	Yes – no further response required

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		The reference to 'Level of Service' in terms of bus service frequency is outdated.	TMAP needs address MOT's Service Planning Guidelines.	MOT	SKM	The updated TMAP submitted with the PPR includes the MOT Level of Service guidelines.	Yes – no further response required
		No specific proposals to link transport networks are included in TMAP	TMAP should include specific proposals to link the transport network within the development area to Parramatta-Liverpool Transitway	RTA	SKM	Bonnyrigg Partnerships in close liaison with FCC will continue to consult with MOT on future bus routes, frequencies and operating hours. Bus links to the transitway are not precluded and the concept plan has been designed to maximise accessibility across the site, including improved pedestrian and bicycle access and the opportunity to provide a bus service through the site via the proposed connecting road.	Yes – no further response required
		Intersection modeling completed for the TMAP does not address potential mode share benefits of bus priority measures at key intersections together with the needs of pedestrians and cyclists	Refer to VPA	MOT	SKM	It is unlikely that there would be sufficient buses to warrant bus priority at intersection on Edensor Road or Elizabeth Drive. Alternative measures, described in Table 9.1 of the updated TMAP have been proposed to provide for mode shift.	Yes – no further response required
		A higher proportion of trips by public transport will be partly achieved by utilising traffic congestion as a car deterrent	Junctions to be upgraded to accommodate bus priority measures to improve bus services or accommodate increased traffic generation should additional parking provision be provided as per current Council policies.	FCC	SKM	The TMAP does not propose to achieve mode shift via traffic congestion as a car deterrent. It is unlikely that there would be sufficient buses to warrant bus priority at intersection on Edensor Road or Elizabeth Drive. Alternative measures, described in Table 9.1 of the updated TMAP have been proposed to provide for mode shift.	Yes – no further response required
		Social housing tenants should be located closest to bus stops wherever possible		FCC	Housing NSW	Housing NSW allocation of social housing and compensation to existing tenants is outside of the EPAA assessment provisions and will be addressed in accordance with Housing NSW policies.	Yes – no further response required
		100% of residents to be located within 400 metres of a bus stop during daylight and night time hours		FCC	SKM	The Masterplan has been designed to enable provision of a bus route through the estate, which would achieve the distance requirement, however, it is not possible to confirm the route or its schedule until MOT has undertaken consultation and notification.	Yes – no further response required
	Pedestrians and Cyclists	Indicates that there are 14% walk trips and 28% other trips (non-vehicle and non-public transport).	TMAP should include some discussion and proposed strategies to maintain and encourage pedestrian and cycle trips.	RTA	SKM	A plan of the pedestrian and cycle routes is included in Section 9.2 of the updated TMAP submitted with the PPR. It is noted that the Concept Plan includes significant infrastructure to improve pedestrian and cycle access across the site, including the construction of footpaths and shareways to improve access and installation of improved lighting to improve natural surveillance	Yes – no further response required
Transport for People with Special Needs		An accessibility plan should be provided for people with special needs	The plan should include purchase and operation of a community bus and accommodating for electronic buggies	FCC	Becton	The existing and likely future residents of the proposed estate will be adequately catered for by the existing public transport and community services, as outlined in the SIA submitted with the Concept Plan.	Yes – no further response required
Traffic Impacts	Impacts of Bonnyrigg Plaza	Transport impacts are closely related to the Bonnyrigg Shopping development proposal which is currently under consideration by Council.	TMAP needs to include new proposals for road and transport networks which may provide access to the local shopping centre and other facilities	RTA	SKM	Bonnyrigg Partnerships is engaged in ongoing discussions with the owners of Bonnyrigg Plaza to identify opportunities to improve the connectivity between the two developments and enhance the existing pedestrian and cycle access between the site and the town centre / transitway.	Yes – no further response required
	Intersection improvements	Some doubts on whether the suggested intersection improvements for the 4 intersections are justified.	RTA needs to verify this data prior to approving the TMAP	RTA	SKM	The SIDRA models were updated to address the comments made by the RTA. Refer to Section 8 of the updated TMAP.	Yes – no further response required
	Cost of intersection improvements	Some proposed intersection improvements are grossly underestimated as no costs are allocated to property acquisition.	There should be some indicative plans which can form the basis for discussion between relevant authorities and stakeholders.	RTA	SKM	Aerial photos with proposed intersection improvements were provided to the RTA at a meeting on 14 February 2008.	Yes – no further response required
	Impact on additional key intersections	Need to assess all additional key intersections	Assess additional intersections and provide recommended treatments	FCC	SKM	Edensor Road/Meadows Road and Cabramatta Road/Meadows Road intersections were assessed. Refer to Section 8.6 of the updated TMAP submitted with the PPR.	Yes – no further response required
	Impact on sensitive frontages such as schools	No detailed assessment on sensitive frontages, such as schools	Need to identify impacts of increased traffic generation and potential need for additional school zones	FCC	SKM	A range of additional measures have been recommended for consideration to enhance the safety for school children. Refer to Section 8.7 and Appendix C of the updated TMAP submitted with the PPR.	Yes – no further response required
Road Network	Internal road network	TMAP must reflect proposed future internal road network	Revised road layout to be provided	FCC	SKM	The future Paramics road network is illustrated in Figure 8.1 of the updated TMAP submitted with the PPR.	Yes – no further response required

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	Internal road layout	Design needs to avoid traffic penetrating through internal road network		FCC	Hughes Trueman	The proposed network and intersection treatments have been designed such that a clearly defined hierarchy of roads has been created, eliminating "rat runs". This was discussed and agreed with Council's Engineers.	Yes – no further response required
	Bifurcation of estate	Continued bifurcation of estate is undesirable as informal pedestrian crossings will have poor natural surveillance and vehicle routes are long & indirect	Masterplan should show two vehicle crossings of Green Valley Creek	FCC	Hughes Trueman	Green Valley Creek is not situated within the development site. It is assumed that Council is referring to Valley Park. The proposed network and intersection treatments have been designed to create a clearly defined hierarchy of roads, which was discussed and agreed upon with Council's Engineers.	Yes – no further response required
	Width of roads	Road should be wider to facilitate waste collection and emergency access		Existing residents	Hughes Trueman	All road widths satisfy or exceed Council's design guides and will accommodate the intended traffic, including emergency and waste collection vehicles. Waste collection vehicles will not be required to use the access places as waste collection will occur from the major road.	Yes – no further response required
	Clarification of terminology in Masterplan	<ul style="list-style-type: none"> <li>Street types on p83-87 should be numbered on p80.</li> <li>2nd example of Local Collector Roads on p80 to be deleted.</li> <li>Road Type 2 on p82 needs to be amended or deleted and all road types renumbered.</li> <li>Road Type 3 on p82 includes a shared way - should be shown on the appropriate diagram.</li> <li>Road cross sections to show relationship of dwelling frontages and road widths for housing types for Collector Rds</li> </ul>	Clarification and standardisation of street terminology required (see detail column)	FCC (Independent Peer Review)	Urbis	All Road Type references have been corrected and the terminology has been clarified in the updated Masterplan.	Yes – no further response required
	Median strips impede accessibility	Median strips impede vehicle turning accessibility		NSW Ambulance Service	Hughes Trueman	All roadworks will be subject to detailed design, including turning analysis of emergency vehicles.	Further information to be provided in detailed design of each stage
	Traffic calming devices can impede emergency vehicles	Traffic calming measures can alter speed of vehicles when locating addresses in an emergency situation		NSW Ambulance Service	Hughes Trueman	All traffic calming measures will be subject to detailed design, including turning analysis.	Further information to be provided in detailed design of each stage
	Adequate turning circles	Ensure adequate turning circles for ambulance vehicles (just over 3m wide)		NSW Ambulance Service	Hughes Trueman	All roadworks will be subject to detailed design, including turning analysis.	Further information to be provided in detailed design stage
	Loss of cul-de-sacs	Private landowners wish to retain 8 specific cul-de-sacs, of which 7 are proposed to be connected with other streets and form a through road.	Detailed submission provided regarding alternate solutions to enable retention of 7 cul-de-sacs in Stages 6, 9, 10, 14, 15 and 17.	Private land owners Sydney South West Area Health Service	Urbis	Removal of cul-de-sacs will facilitate improved crime prevention and is supported by NSW Police. Further, the proposed improvements to connectivity, public domain benefits and accessibility to the open space, schools and other local activity nodes will outweigh any potential or perceived negative impacts.	Yes – no further response required
	Staging	Each stage needs to be self contained and provide appropriate turning areas	Turning areas should be provided at all times in each stage for roads to ensure access for vehicles and enter and leave each road in a forward direction	FCC	Hughes Trueman	Each staged construction package will be designed to ensure that it provides appropriate turning areas for vehicles, as has been created in Stage 1 (refer Stage 1 Concept Approval plans).	Further information to be provided in detailed design of each stage
Access Places	8 metre wide streets	CPTED issues, access, garage. Congestion and safety	Further information, response on additional parking spaces	FCC	Hughes Trueman Urbis	Turning template and sight line analysis have been submitted with the PPR. The issues relating to CPTED, access, garages, congestion and safety have all been resolved with Council and have been addressed in the PPR.	Yes – no further response required
		Concern regarding access for emergency services, waste collection and resident access		Existing residents Fairfield Migrant Resource Centre	Hughes Trueman	Turning templates have been included in the Infrastructure Report submitted with the PPR. Waste collection vehicles will not use the access places as waste collection is intended to occur from the major road (i.e. collector roads or access streets).	Yes – no further response required
		Concern regarding safety and security for vehicles and pedestrians		Bonnyrigg Public Tenants Group	Hughes Trueman	Turning template and sight line analysis have been included in the Infrastructure Report submitted with the PPR to demonstrate that adequate vehicle maneuverability and sight distances are provided within the access places.	Yes – no further response required
Car Parking	Resident car parking	Lock up garage preferred, with at least two car parking spaces for a large family	Garages to be located in close proximity to dwellings	Existing residents Fairfield Migrant	SKM	The resident car parking rates are considered appropriate, taking into account: <ul style="list-style-type: none"> <li>Parking surveys undertaken at other similar developments that</li> </ul>	Yes – no further response required

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				Resource Centre Bonnyrigg Public Tenants Group		show parking supply exceeds parking demand. <ul style="list-style-type: none"> <li>Strategic objectives of land use and transport planning.</li> <li>Proximity of the site to the transitway and town centre.</li> <li>Extensive infrastructure investment in improving pedestrian and cycle access across the site.</li> </ul> Refer to the PPR and TMAP for a detailed response.	
	Visitor car parking	Provide parking spaces for visitors		Existing residents	SKM	Under statutory requirements, visitor car parking would generally only be required for the proposed 3 and 4 plex dwellings in Stage 1, with one visitor space to be provided per building/lot to accord with Council's standard rates of 0.25 spaces per dwelling for visitors. However, it is considered that the provision of such on-site spaces is inappropriate and the use of on-street car parking is appropriate based on the following: <ul style="list-style-type: none"> <li>Availability of on-street car parking.</li> <li>Equity of access.</li> <li>Proximity of on-street car parking.</li> <li>Potential negative impacts of providing on-site car parking.</li> </ul> Refer to the PPR and TMAP for a detailed response.	Yes – no further response required
	Active open space	All car parking for sports parks should be provided off-street and not be shared with other facilities unless demands are compatible		FCC	Urbis	The proposed car parking is considered appropriate, having regard to the retention of the two existing playing fields and off-street car parking spaces. Further, there will be a significant increase in the availability of on-street car parking arising from the realignment of Bunker Parade. Approximately 36 car parking spaces will be provided on the western side of Bunker Parade in close proximity to the playing fields.	Yes – no further response required
	Compliance with city wide DCP- medium density	Provision of on site parking. Inadequate levels of parking, congestion issues.	Increase provision of parking on site or provide guarantee re mode shift through VPA	FCC	SKM	The proposed on-site car parking is considered adequate, as outlined above. Further, the front doors to all dwellings are located on the primary street frontage, which includes on-street car parking, and not the 'access places', which means that there is unlikely to be any congestion impacts on the 'access places'. Refer to the PPR and TMAP for a detailed response.	Yes – no further response required
Signage	Signage required to facilitate rapid firefighting intervention and other emergency service response	All streets and internal roadways are to be prominently signposted, and all buildings are to be clearly identified by their relevant street number, particularly at night.		NSW Fire Brigades NSW Ambulance Service	Urbis Hughes Trueman	Standard Council signage will be provided.	Yes – no further response required
<b>INFRASTRUCTURE ISSUES</b>							
Potable Water	Impact on local water supply	Water booster pumping station and additional lead-in watermain may be required	Provide response	Sydney Water	Hughes Trueman	Sydney Water feasibility application results have indicated that these upgrades would not be required.	Yes – no further response required
Recycled Water and Water Harvesting	Preferred servicing solution	Preferred servicing solution including recycled water expected in Oct08		Sydney Water	Hughes Trueman	Bonnyrigg Partnerships is currently in commercial negotiations with a number of service providers for the provision of recycled water to the site.	Yes – no further response required
	Access to recycled water not confirmed. Compliance with BASIX.	The proponent is negotiating to gain access to recycled water to the development.	What alternatives are proposed if recycled water is not available or if there is a gap in delivery? More information is needed about how BASIX will be met by the use of recycled water.	FCC	Hughes Trueman	If there is a gap in the delivery of recycled water to Stage 1, dwellings will still be provided with the required dual reticulation infrastructure, however, dwellings will initially be serviced with water supply from potable water services on a temporary basis. BASIX compliance will be documented following provision of recycled water on the BASIX website.	Yes – no further response required
	Harvesting and reuse of grey water generated on-site	Each site will generate its own grey water, which is a resource that can be re-used	More details are needed of how grey water is to be harvested and reused from each individual site.	FCC	Hughes Trueman	As discussed with Council, the potential uses for recycled grey or black water on the site is limited as the only potential use was identified to be hosing of the streets. It is considered that this use is not sustainable or politically desirable. Therefore, grey water harvesting is not proposed due to the use of recycled water on site.	Yes – no further response required
		Resident demand for recycled water, water tanks and greywater usage	Provide water tanks and system for gardens	Existing residents Fairfield Migrant Resource Centre	Hughes Trueman	Bonnyrigg Partnerships is currently in commercial negotiations with a number of service providers for the provision of recycled water to the site.	Yes – no further response required
	Harvesting and reuse of stormwater generated from ground surfaces	Each site and surface will generate runoff which is a resource that can be re-used	More details are needed of how stormwater is to be harvested and reused from each individual site.	FCC	Hughes Trueman	As stated previously, grey water harvesting is not proposed due to the use of recycled water on the site.	Yes – no further response required
		Grey water irrigation in sports grounds only		FCC	Hughes Trueman	As stated previously, grey water harvesting is not proposed due to the use of recycled water on the site.	Yes – no further response required



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	Harvesting and reuse of rainwater from the roof areas for all buildings	Each building will generate runoff from roof areas which is a resource that can be reused	More details are needed of how rainwater is to be harvested and reused from each individual site.	FCC	Hughes Trueman	Rainwater harvesting is not proposed due to the use of recycled water on the site.	Yes – no further response required
S.73 Compliance Certificate	A S.73 Compliance Certificate is required from Sydney Water	Developer must fund works and should engage a Water Servicing Coordinator to get S.73		Sydney Water	Hughes Trueman	A Section 73 application will be lodged upon receipt of consent for Stage 1.	Section 73 to be sought at CC stage
Sewer	Increased sewer flows	Reduced infiltration initiatives encouraged in future design of new sewer infrastructure	Reduce maintenance holes by optimising use of maintenance shafts and use of solvent welded joints for reticulation sewers	Sydney Water	Hughes Trueman	Bonnyrigg Partnerships will comply with the Sydney Water's Notice of Requirements in the preparation of construction plans, including reduced infiltration initiatives.	Section 73 to be sought at CC stage
	Overflows and surcharge points	Where do these occur and in which events	Impact on creek system?	FCC	Hughes Trueman	Correspondence with Sydney Water indicates that there are two sewer overflows, however, there are no records of overflow statistics.	Yes – no further response required
Electricity	Electrical load requirements	If the electrical load required for the development is less than 63 amps over 3 phases or less than 100 amps single phase, then no application is required	Seek professional services of an electrician to confirm load requirement and submit an application to IE if required.	Integral Energy	Hughes Trueman	Bonnyrigg Partnerships will engage a Level 3 Electrical Designer to perform the necessary calculations and make an application to Integral Energy following consent.	Application to be lodged, if required, at CC stage
	Overhead power lines	Overhead power lines currently run through back of some residential properties	Underground existing powerlines	Private owner (Louise Place)	Hughes Trueman	The existing high voltage overhead mains are proposed to be buried for a portion of the length. Bonnyrigg Partnerships are currently investigating financial and construction constraints on the extent of the burial. This may include the Louise Place length, however, this is yet to be confirmed and discussed with the residents.	Yes – no further response required
Stormwater and Flooding	Safety of WSUD measures	Uncovered stormwater drains are unsafe for young children		Existing resident	Hughes Trueman	All stormwater drainage infrastructure has been designed in accordance with the relevant statutory safety requirements.	Yes – no further response required
		Uncovered stormwater drains are breeding ground for insects and stagnant water		Existing resident	Hughes Trueman	There are no wet basins contained in the proposal and as such, the proposal does not give rise to concerns regarding insects or stagnant water.	Yes – no further response required
	WSUD Entry Feature	Address potential for graffiti, safety concerns, heights and branding strategies.		FCC	EDAW	The revised Landscape Plans have addressed potential for graffiti, safety and heights. Branding will be included as part of the Public Art Strategy.	Yes – no further response required
	Creek line	Confusion of creek line's purpose and overall function. Provide maintenance manual and maintenance load.		FCC	EDAW	The 'creek line' is a vegetated gravel-lined drainage swale which provides for overland flow and serves as an ecological function. There is an existing stormwater pipe underground. A maintenance manual and maintenance loads have been provided in the Project Design Report.	Yes – no further response required
	Draft DECC Guidelines to be met. Monitoring program needed during construction	Inconsistency of targets in plans	More information needed on what targets are proposed. Developer to meet DECC guidelines. Monitoring programme to be implemented.	FCC	Hughes Trueman	Targets have been confirmed and reports amended where necessary and resubmitted with the PPR.	Yes – no further response required
	Main stream flood modeling - flood risk mapping	Risk maps needed in accordance with Chapter 11 of the City Wide DCP. This information is needed to set floor levels of buildings		FCC	Hughes Trueman	Flood risk maps have been undertaken and are included in the Water Cycle Management report which is submitted with the PPR.	Yes – no further response required
	Overland flood modeling and mapping	Overland risk maps needed in accordance with Chapter 11 of the City Wide DCP. This information is needed to set floor levels of buildings	Influences house floor levels	FCC	Hughes Trueman	Overland flow risk maps have been undertaken and are included in the Water Cycle Management report which is submitted with the PPR.	Yes – no further response required
	Overland flow - design information required	New drains and roads require overland flow to be modeled and assessed	Influences house floor levels	FCC	Hughes Trueman	Modeling and assessment of overland flow for new drains and roads has been undertaken and are included in the Water Cycle Management report which is submitted with the PPR.	Yes – no further response required
Groundwater Flow and Urban Salinity	Soil salinity	Unclear if salinity issues have been checked		FCC	JBS	A detailed site inspection was undertaken as part of the Environmental Site Assessment and no signs of urban salinity were observed (refer to Concept Plan Environmental Site Assessment). Further, the revised Water Cycle Management report submitted with the PPR addresses salinity and states that the proposed development will have a negligible effect on salinity.	Yes – no further response required
	Recharge capacity	Unclear whether proposal addresses the capacity of recharge and whether what is proposed is appropriate		FCC	JBS	With consideration to the proposed Water Sensitive Urban Design (WSUD) initiatives as part of the proposed development - which result in considerably increased recharge - the nett effect on groundwater recharge is positive. However, it is noted that	Yes – no further response required

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						groundwater at the site is present beneath low permeability clays and overall recharge rates are low	
Site Contamination	More testing is required	Preliminary testing is unclear as to the need for further testing	Unexpected findings protocol to deal with contamination found during construction	FCC	JBS	A detailed Environmental Site Assessment Report for Stage 1 has been submitted to Council. In accordance with the recommendation of this report, a Remedial Action Plan will be developed as part of the CC documentation in accordance with the relevant requirements to address site contamination. Each future stage will address site contamination in the relevant application under the Act. Any approvals may contain requirements to comply with appropriate procedures for handling of contaminants and notification requirements, as outlined in the Construction Management Plan.	Yes – no further response required
Road Reserve Infrastructure	Footpaths	Footpaths to be provided on both sides of street	Supported by Council - maintenance costs to be addressed	FCC	EDAW	It is considered appropriate to provide footpaths on both sides of the street, having regard to the local context, including safety, improved accessibility and promotion of walking and cycling as a means of transport, as agreed with Council.	Yes – no further response required
	Shareways	Shared paths pose risk to pedestrians due to different travelling speeds. Inconsistent with aging population.		FCC	EDAW	In some locations streetscapes have 2.5m shareways located on one side of street and normal 1.2m pedestrian path on the other. This is standard practice which is considered to satisfy provision for different traveling speeds.	Yes – no further response required
Street Lighting	Energy efficiency	Council to authorise lighting designs to ensure acceptable financial burden and energy efficiency design	All lighting to be upgraded for energy efficiency and to meet approved lighting standards	FCC	Hughes Trueman	Detailed design of street lighting will be coordinated in liaison with Integral Energy and Council.	Further information to be provided in detailed design
	Funding	Application for funding assistance may be lodged for street lighting	Analyse saving of electricity over multi-year period to identify whether funding can be sought under Energy Savings Fund	FCC	Hughes Trueman	Upon completion of the approved design of the street lighting system, calculations will be undertaken and an application lodged for funding, if appropriate.	Further information to be provided in detailed design
	Spacing	Spacing between street lights	Location of light poles and street trees needs to be assessed to ensure lighting levels are maintained in a sustainable manner	FCC	Vision	The detailed design of street lighting will be undertaken at the detailed design stage to incorporate the existing lighting locations, physical site constraints and minimum lighting levels required to satisfy the various statutory and social requirements.	Further information to be provided in detailed design of each stage
	Emergency services	Adequacy of lighting for emergency service response		NSW Ambulance Services	Vision	The detailed design of street lighting will be undertaken at the detailed design stage to incorporate the existing lighting locations, physical site constraints and minimum lighting levels required to satisfy the various statutory and social requirements.	Further information to be provided in detailed design of each stage
Street Trees	Canopy cover	Vegetation comparison needed for Bonnyrigg Estate. 30% canopy cover required.			EDAW	EDAW have calculated the percentage canopy cover for Stage 1 (using actual tree locations) to be 39% cover. (Stage 1 = 39,757sqm with 15,134sqm canopy cover (mature trees) = 39% canopy cover) The Stage 1 area is based on the residential zone only using the centre line of the perimeter roads as the boundary (i.e. Stage 1 open space is not included in the calculation).	Yes – no further response required
	Cultural tree planting	Provision of cultural trees to represent original home of residents is not supported. Native trees are not regarded as suitable for streets.			EDAW	Concept misunderstood. There are many examples of successful native street trees. The cultural trees are designed to break up the estate into different character zones creating a diverse vegetation environment.	Yes – no further response required
Rain Gardens		Drop in footpath level creates trip hazard. Minimal maintenance and changes in footpath levels			EDAW	This is a detailed design issue and will be provided as part of the Construction Certificate documentation.	Further information to be provided in detailed design of each stage
Fire Hydrants		Fire hydrants need to be incorporated	Reticulated water main needs to incorporate a comprehensive installation of the fire hydrants throughout.	NSW Fire Brigades	Hughes Trueman	A comprehensive design of fire hydrants will be undertaken in the detailed design stage of the project.	Further information to be provided in detailed design of each stage
Noise Wall	Location and drainage	Flooding, ownership and ongoing maintenance	Applicant to liaise with Council staff on appropriate use of dense landscaping to minimise access for graffiti and still allow for maintenance of landscaping and wall, as required	FCC	Urbis	The noise wall is identified within the Concept Plan, however, it should be realised that it will be subject to a separate development application, which will address all relevant issues, including those identified in Council's submission.	Will be addressed in relevant stage
Graffiti	Protection of public and	Noise wall, shelters, furniture, etc	Graffiti protection and costing	FCC	Becton	All designs are proposed to minimise graffiti opportunities and ease	Yes – no further

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	private elements					of graffiti removal.	response required
Asset Management Plans	Required by asset class - built - with life cycle costing	Parks, roads, street furniture, lighting, trees	Information to define assets, attributes and final scheduling etc...	FCC	EDAW Hughes Trueman	Life cycle costings are to be provided to Council following receipt of FCC template.	To be provided to FCC following receipt of FCC template
	Required by asset class - natural - with life cycle costing	Natural assets and GPT, etc	Information to define assets, attributes and final scheduling	FCC	Hughes Trueman	Life cycle costings are to be provided to Council following receipt of FCC template.	To be provided to FCC following receipt of FCC template
<b>ENVIRONMENTAL ISSUES</b>							
Reduced Energy Consumption	Reduce electrical consumption	Solar hot water	Extra info required re provision	FCC	Advanced Environmental	Gas-boosted solar hot water systems have been recommended for stretch target approach to the dwellings. This will be further refined with BASIX evaluation.	Yes – no further response required
			Solar system for lights and heating water is recommended	Fairfield Migrant Resource Centre	Advanced Environmental	Efficient LED or compact fluorescent lighting has been recommended for all dwellings. AC is not being provided, so the major energy use is domestic hot water for which gas-boosted solar systems have been recommended.	Yes – no further response required
		Street lighting	Provide information on number of existing light poles	FCC	Hughes Trueman	The detailed design of street lighting will be undertaken at the detailed design stage to incorporate the existing lighting locations, physical site constraints and minimum lighting levels required to satisfy the various requirements.	Further information to be provided in detailed design of each stage
	Reduce greenhouse gases	Hardstand	Use recycled material in road construction material.	FCC	Hughes Trueman	It is proposed that road pavements are to be milled on-site for use as road base and structural fill. Refer to Environmental Construction & Management Plan – Appendix A Waste Management Plan, which has been signed off by Council's Environmental Health Officer.	Yes – no further response required
Substations	Treatment	Review surface treatment of new pad substations	Include public art facilities and build connections with community	FCC	Hughes Trueman	Surface treatment of new and existing pad-mount substations will be in accordance with Integral Energy requirements.	Further information to be provided in detailed design of each stage
			Allocate capital to be spent on upgrading substations to provision of further measures to reduce energy consumption	FCC	Hughes Trueman Advanced Environmental	Energy efficiency BASIX targets will be met and where feasible, stretch targets met. The number of pad-mount substations is subject to detailed electrical design works to be approved by Integral Energy.	Further information to be provided in detailed design of each stage
Impervious Surface Area	Reduce hard site coverage	Level of hardstand area on housing sites and footpaths	Investigate use of non-impervious materials.	FCC	EDAW	The proposed residential designs have achieved minimum hard stand area. Non-impervious materials will be used where possible.	Yes – no further response required
Water Quality	Infiltration	Improve water quality by increase of infiltration	Include information on potential for additional pipes to assist in treatment train by returning water to the ground, including consideration of use of leaky pipes	FCC	Hughes Trueman	Due to the proximity of the majority of pipes to structures and/or pavements and the number of discharge points, no perforated pipes are proposed. A network of bio-retention swales and rain gardens are proposed to return some water to groundwater supplies. It is however, expected that this will be minimal, due to the impermeable nature of the existing clay soils.	Yes – no further response required
	Eastern catchment basin	Potential use of and need for eastern catchment basin to be discussed with Council to ensure adequate controls for quality and quantity	Discuss with Council	FCC	Hughes Trueman	Discussions have taken place with Council. Calculations and costings have been provided to Council in the Stage 1 Infrastructure Report.	Ongoing discussions with Council
	Protection of infrastructure	Examine condition of stormwater infrastructure and ensure it is protected during construction	Proposal requested	FCC	Hughes Trueman	CCTV inspection of the finished stormwater infrastructure (retained and new) will be submitted to Council as part of the handover procedures for infrastructure to be owned and maintained by Council.	Further information proposed to be provided at handover stages
	Water sampling	Ensure no degradation of water quality during the project by undertaking water sampling	Liaise with Council regarding location, type and frequency of testing	FCC	Hughes Trueman	Extensive measures are proposed to avoid water quality impacts. Water quality samples will be undertaken at regular intervals at the downstream end of sediment basins or other locations. Samples will be tested for suspended solids, pH and other tests. All records will be kept on site and made available to the DEC, Fairfield Council and any other authorised person upon request. Refer Section 4.19 of the Environmental Construction and Management Plan, which has been signed off by Council's Environmental Health Officer.	Yes – no further response required
Water Use	Dual reticulation	Dual reticulation is to be installed without commitment to recycled water supply	Provision of recycled water supply is essential and installation of dual reticulation is required for each dwelling.	FCC	Hughes Trueman	Dual reticulation is proposed for each dwelling (refer to Infrastructure Report).	Yes – no further response required
	Consumption reduction	Council's EMP sets targets for residential water consumption	Infrastructure and fittings should support EMP targets for reduction	FCC	Advanced Environmental	The proposal meets the 40% target for residential water consumption reductions based on the recommendations by	Yes – no further response required

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		reduction of 40%	in water use		Hughes Trueman	Advanced Environmental. The highest available WELS rated fittings and fixtures have been recommended to minimise discharges. A reticulated recycled water loop will provide infrastructure to reduce potable water consumption further.	
Sewerage	Minimise discharges	Increase in population will require additional measures to meet stretch targets	Use high efficiency rated fittings to minimise discharge into sewerage system	FCC	Advanced Environmental Hughes Trueman	The highest available WELS rated fittings and fixtures have been recommended to minimise discharges.	Yes – no further response required
Open Space Irrigation	Irrigation of playing fields	Proposal does not include irrigation for open space playing areas and irrigation will be required for adequate maintenance	Water supply for irrigation is to be from a recycled or harvesting system built into the WSUD strategy. The system is to be compatible with Council's existing system and use subsoil irrigation to minimise evaporation	FCC	Hughes Trueman	Playing field irrigation is to be provided from the reticulated recycled water supply and is subject to detailed design for CC.	Further information to be provided in CC
	Amenities building		Non-potable water supply to be provided to toilets	FCC	Hughes Trueman	Non-potable water will be provided to the amenities building for toilet flushing.	Yes – no further response required
Private Swimming Pools	Restrict private swimming pools	Proposal to restrict private swimming pools is supported, however, no information is provided regarding mechanism to enforce this requirement or resulting impact on demand for public swimming facilities	Provide information on how the system is to be implemented and enforced	FCC	Advanced Environmental	The ESD report recommended that swimming pools be avoided. The BASIX certificates require this to be shown on the DA and CC plans. Any amendments to those plans required by individuals would need to be reviewed and approved by Council.	Yes – no further response required
Private ESD Opportunities	Thermal control	Thermal control is not available without heavy building design, which implies increased use of AC and heating	Design to provide thermal comfort such that a majority of occupants are comfortable for 98% of the year	FCC	Advanced Environmental	Thermal comfort studies have shown that the dwellings will be comfortable for more than 98% of the year with effective natural ventilation, as detailed in the dwelling design report. The effectiveness of the cross ventilation in corner units has been addressed in the AE memo dated 6 March 2008.	Yes – no further response required
	Natural light	Natural light is not provided to kitchen, bathrooms and toilets	Include natural light within existing architectural layouts	FCC	Advanced Environmental	Where feasible, kitchens and bathrooms have been provided with windows for the provision of natural light.	Yes – no further response required
Off Site ESD opportunities	ESD initiatives	Commitment to proposals in Section 5 is unclear. WSUD Initiatives for Public Realm are supported	Recommendations in Section 5.2 of Environmental Opportunities Report should be implemented	FCC	Advanced Environmental	WSUD has been included in the Masterplan ESD strategy.	Yes – no further response required
Rate Revenue	Stormwater levy and domestic waste rate	Calculations and values in relation to changes in the Stormwater Levy and Waste Management Charge are unclear as to the changes in Council revenue	Provide more detail on calculations and assumptions, with staging of potential revenue and life cycle costs (operations & maintenance) to allow Council to estimate impact on budget and operations	FCC	Macroplan	The dwelling numbers per stage have previously been provided to Council. The life cycle costs for infrastructure have already been determined by Council. Details of Asset Management will be provided as part of the subdivision certificate process.	Further information to be provided with Subdivision Certificate
Waste Management	Commercial premises	Commercial premises have potential to generate waste	Details are required of methods proposed to reduce waste disposal and increase resource recovery from commercial component	FCC	Hughes Trueman	Waste management processes of the commercial component would be subject to each individual DA and dependant on the type of development proposed.	Further information to be provided with Stage 6 DA
	Residential	Management of future domestic waste is not adequately addressed and is left to Council to implement a system without the applicant proposing any improved methods for waste reduction and management	Liaise with Council in relation to provision of facilities for waste collection	FCC	Hughes Trueman	Residential waste management is proposed to be in accordance with Council's current requirements. Refer to Environmental Construction & Management Plan Appendix A - Waste Management Plan, which has been signed off by Council's Environmental Health Officer.	Yes – no further response required
Sustainability	Additional measures needed to become a leader in sustainability	Consider incorporating on-site household water reuse, solar hot water systems, sun shading devices, better building orientation, increased roof pitches & different roof materials	More info needed re: water reuse, solar hot water systems. Review / response to suggested thermal performance measures.	FCC (Independent Peer Review)	Advanced Environmental Urbis	The orientation is largely determined by the site constraints, however, it is considered that the siting and design of the dwellings has been optimised, taking into account the relevant site conditions, including both environmental and social issues and the need for passive surveillance of public spaces. The dwelling design report recommends: <ul style="list-style-type: none"> <li>A site-wide recycled water system which will achieve better water savings than household water re-use.</li> <li>Gas-boosted solar hot water.</li> <li>Shading as required by NatHERS modeling to deliver an optimal thermal solution.</li> <li>Passive ventilation of the roof space will reduce heat gain into</li> </ul>	Yes – no further response required



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						the space as much as changing the tile colour as it stops the build-up of hot air in the roof cavity over a day.	
<b>ECONOMIC ISSUES</b>							
Retail	Economic assessment does not include Plaza redevelopment	Delete all references to an increase in retail or commercial space within the development area	Provide appropriate economic assessment	FCC	Macroplan	The Concept Plan proposes to incorporate small scale, convenience based retail and commercial services in Stage 6 to cater for local residents, particularly those who are located on the eastern portion of the estate. The Masterplan and Concept Plan Maps clearly show that the potential retail and commercial activities will be of a small scale and integrated with the community facilities to form a central hub within the renewed estate. These will be assessed as part of a separate DA to Council. The economic assessment undertaken by Macroplan identifies potential opportunities for retail and commercial services to be accommodated on the estate and states that additional analysis will be required at the relevant stage to confirm this opportunity.	Detailed EIA to be submitted with future application for retailing in Stage 6
Employment and Training	Provide an employment and training strategy	A primary objective of this project is to provide local employment, training (apprenticeships etc)	Employment and Training Strategy has not been provided	FCC	Becton	An Employment and Training Strategy has been incorporated into the Community Renewal Services Plan and is submitted with the PPR.	Yes – no further response required
Local Business	Provide an economic assessment and development study and strategy.	A primary objective of this project is to provide local business growth and spending.	Use of local supply chains, business development strategy, and retained spending strategy	FCC	Becton	All information relating to local business and development strategy is included in the Community Renewal Services Plan submitted with the PPR.	Yes – no further response required
<b>OTHER ISSUES</b>							
LEP Amendment	Rezoning required to facilitate new zones and controls	Council has previously resolved to request the Minister to use the rezoning procedures available under Part 3A	Minister and Department of Planning to be advised of Council's preference	FCC	Urbis	Bonnyrigg Partnerships is supportive of Council's position and would be happy to assist in liaison with the Minister and / or the Department of Planning regarding this matter.	FCC to be primarily responsible for driving LEP preparation
	Proposed rezoning should include St Johns Park Sports Club	The Club has requested the LEP amendment to include the rezoning of land on the corner of Edensor Rd and Bonnyrigg Ave	Land should be rezoned to part Business B1 and part Residential R1	St Johns Sports Club	Urbis	This issue is a matter for Council to address in the preparation of their Comprehensive LEP.	FCC to be responsible for LEP preparation