

PREFERRED PROJECT REPORT

Bonnyrigg Living Communities

June 2008

bonnyrigg
living communities



Preferred Project Report

Bonnyrigg Living Communities Project

Prepared for Bonnyrigg Partnerships

Level 14, 55 Clarence Street

Sydney NSW 2000

5 June 2008

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1 Introduction

This Preferred Project Report (PPR) has been prepared on behalf of Bonnyrigg Partnerships relating to the Bonnyrigg Living Communities Project.

The report has been prepared in accordance with the provisions of Section 75H(6) of the Environmental Planning and Assessment Act 1979 (the Act) which states:

The Director-General may require the proponent to submit to the Director-General:

- (a) a response to the issues raised in those submissions, and*
- (b) a preferred project report that outlines any proposed changes to the project to minimise its environmental impact, and*
- (c) any revised statement of commitments.*

The PPR provides a brief history of the Bonnyrigg Living Communities Project, including the key steps associated with the preparation, lodgement and assessment of the Part 3A application and outlines the proponent's response to the issues raised by Fairfield City Council in their role as the delegated assessment authority and the issues arising from the public exhibition of the application.

The report summarises the proposed amendments to the proposal to minimise its potential impacts and provides revised Statements of Commitments at **Section 8** for the Concept Plan and Stage 1 Project Applications.

The PPR also outlines the proponent's preferred approach to the consent authority arrangements for the future stages of the project and the proposed amendments to the local town planning controls.

Each of these matters is addressed in the following sections:

- Section 2 – Bonnyrigg Living Communities Project.
- Section 3 – Part 3A Application Process.
- Section 4 – Site Description.
- Section 5 – Development Description.
- Section 6 – Identification of Key Issues and Responses.
- Section 7 – Modifications to the Part 3A Application.
- Section 8 – Revised Statements of Commitments.
- Section 9 – Consent Authority Arrangements.
- Section 10 – Local Plan Amendments.

The PPR is supplemented by the following documents to assist Fairfield City Council in the final assessment of the Part 3A application:

- Concept Plan documentation:
 - Updated Bonnyrigg Masterplan prepared by Urbis (**Appendix 1**).
 - Updated Concept Plan Maps prepared by Urbis (**Appendix 2**).
 - Updated Community Renewal Services Plan prepared by Bonnyrigg Partnerships (**Appendix 3**).
 - Community Renewal Services Implementation Plan prepared by Bonnyrigg Partnerships (**Appendix 4**).
 - Submissions Response Table prepared by Urbis (**Appendix 5**).

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- Updated Water Cycle Management Report prepared by Hughes Trueman (**Appendix 7**).
 - Updated Transport Management Accessibility Plan prepared by SKM (**Appendix 8**).
 - Project Design Report prepared by EDAW (**Appendix 9**).
 - Updated Masterplan Infrastructure Report prepared by Hughes Trueman (**Appendix 10**).
 - Updated Masterplan Environment & Construction Management Plan prepared by Hughes Trueman (**Appendix 11**).
 - Updated Economic Impact Assessment prepared by Macroplan (**Appendix 13**).
 - Infrastructure Delivery Plan prepared by Urbis (**Appendix 18**).
 - Stage 1 Project Application documentation:
 - Updated Compliance Assessment Table prepared by Billard Leece (**Appendix 6**).
 - Updated Subdivision Plan prepared by Vince Morgan (**Appendix 12**).
 - BASIX Certificates prepared by Advanced Environmental and NatHERS Assessment prepared by Vipac (**Appendix 14**).
 - Updated Crime Prevention Through Environmental Design Assessment prepared by Urbis (**Appendix 15**).
 - Updated Stage 1 Environment & Construction Management Plan prepared by Hughes Trueman (**Appendix 16**).
 - Updated Stage 1 Infrastructure Report prepared by Hughes Trueman (**Appendix 17**).
 - Updated Architectural Drawings prepared by Billard Leece (**Appendix 19**).
 - Updated Landscape Drawings prepared by EDAW (**Appendix 20**).
 - Updated Infrastructure Drawings prepared by Hughes Trueman (**Appendix 21**).
 - Updated Indicative Materials and Finishes Report prepared by Rust Architecture and Design (**Appendix 22**).

2 Bonnyrigg Living Communities Project

The redevelopment of Bonnyrigg Estate forms part of the Housing NSW (formerly known as Department of Housing) program to 'renew and strengthen communities in high-need Public Housing estates in NSW'. The Housing NSW objectives for the regeneration of the Bonnyrigg Estate, include:

- Design and construction of new infrastructure.
- Design and construction of new Social Housing and private housing to achieve the target mix of 70% private housing and 30% public housing.
- Rehabilitation of existing infrastructure.
- Refurbishment of existing Social Housing.
- Increasing the overall number of dwellings located within the estate.
- Strengthen the existing community and develop a 'services driven' community renewal services plan to build and unite existing and new communities.

The State Government adopted a public private partnership approach to the renewal of Bonnyrigg, with Bonnyrigg Partnerships being selected by Housing NSW to undertake the redevelopment. Bonnyrigg Partnerships comprises Becton Property Group Limited, Westpac Banking Corporation Limited, St George Community Housing Association and the Spotless Group.

Bonnyrigg Partnerships will be responsible for the finance, design and construction of all the new homes and tenancy and facilities management services for the social housing on the estate. The construction of the public and private housing, as well as parks and community facilities, is expected to take around 15 years, as well as providing tenancy management over a 30 year period.

Bonnyrigg Partnerships was selected to implement the renewal of Bonnyrigg following a tender process in which a conceptual Masterplan for the physical renewal of the area was submitted as part of large suite of documents outlining the intended approach to achieve Government objectives. While the conceptual Masterplan has been significantly refined and enhanced since the tender process, the current Masterplan remains consistent with the overall approach and vision to the redevelopment of the area that was accepted by the Housing NSW in consultation with the NSW Department of Planning and Fairfield City Council.

3 Part 3A Application Process

The preparation of the Part 3A application, comprising a Concept Plan and Stage 1 Project Application, was subject to a lengthy process, including extensive consultation with existing residents, neighbouring land owners, Council and the likely future community, liaison between the proponent, State and local government and other key stakeholders, and detailed investigations, research and analysis by a range of specialist consultants.

Since the lodgement of the application in November 2007, the proposal has been subject to a rigorous assessment process, including the public notification of the proposal for 58 days (December 2007 to February 2008), review of submissions from a range of stakeholders and a comprehensive assessment lodged in association with the Concept Plan and Stage 1 Project Application.

Key dates in the preparation, lodgement and assessment of the Part 3A application are outlined as follows:

December 2004	The Bonnyrigg Living Communities Project was announced by the State Government.
December 2004 to June 2006	Fairfield City Council (Council) and Housing NSW undertook a series of community consultation initiatives to ensure that the views of the community were considered in the process.
30 June 2006	The Minister for Planning (the Minister) formed the opinion that the proposed staged renewal of the Bonnyrigg Estate is a development to which Part 3A of the Act applies.
18 October 2006	<p>Bonnyrigg Partnerships was announced by the NSW Government as the preferred bidder for the Bonnyrigg Living Communities Project.</p> <p>The 30 year Public Private Partnership with the NSW Government includes the urban renewal of the estate over 15 years and the management of the estate for a 30 year period.</p>
October 2006 to November 2007	A significant number of meetings, briefing sessions and workshops (i.e. over 80 meetings) were held with Council officers, Councillors, the Department of Planning, Housing NSW, other government agencies, key stakeholders and the community regarding the proposed Masterplan, the Stage 1 dwelling designs and the preparation of the Part 3A application.
11 April 2007	The Minister delegated all assessment powers in relation to the project to Council. The Minister retained the consent role.
20 April 2007	Bonnyrigg Partnerships signed the Project Deed with Housing NSW to undertake the Bonnyrigg Living Communities Project.
30 April 2007	A Preliminary Environmental Assessment (PEA) was lodged with Council (and the Department of Planning) in accordance with Section 75F of the Act requesting that Director-General's Environmental Assessment Requirements (DGRs) be issued by Council for the Bonnyrigg Living Communities Project.
9 May 2007	<p>A Planning Focus Meeting (PFM) was held at Council offices and attended by the proponent, core members of the consultant team and a range of public authorities and agencies, including:</p> <ul style="list-style-type: none"> ▪ Fairfield City Council. ▪ NSW Department of Planning – Strategic Assessments.

	<ul style="list-style-type: none"> ▪ NSW Department of Planning – Sydney Region West. ▪ NSW Roads and Traffic Authority. ▪ Ministry of Transport. ▪ NSW Department of Education and Training. ▪ Sydney South West Area Health Service – NSW Health.
29 May 2007	The DGRs were issued by Council on behalf of the Director-General outlining the matters to be addressed in the Environmental Assessment.
25 October 2007	An Environmental Assessment was lodged with Council for a test of adequacy in accordance with the provisions of Section 75H of the Act. Correspondence was subsequently issued on 14 November 2007 directing that a range of issues are required to be addressed within 21 days of the date of the letter.
8 November 2007	<p>An application seeking approval for a Concept Plan Approval for the renewal of the estate and approval for a Stage 1 Project Application for demolition, subdivision and construction of the first stage of the planned renewal was lodged with Council. The Environmental Assessment lodged with the application was prepared in accordance with the provisions of Part 3A of the Act and the Environmental Assessment Requirements.</p> <p>Documentation was also lodged regarding a proposed amendment to the Local Environmental Plan and Development Control Plan and the preparation of a Voluntary Planning Agreement.</p>
27 November 2007	Additional documentation was lodged with Council, responding to the matters raised in Council correspondence dated 14 November 2007 regarding the test of adequacy.
19 December 2007 to 15 February 2008	The Part 3A application, comprising the Concept Plan and Stage 1 Project Application, was publicly exhibited for 58 days.
8 February 2008	<p>Correspondence was issued by Council regarding three key issues identified in the preliminary assessment process:</p> <ul style="list-style-type: none"> ▪ Urban Design (Stage 1 Project Application). ▪ Width of Rear Laneways (Concept Plan & Stage 1 Project Application). ▪ Car Parking (Concept Plan & Stage 1 Project Application).
22 February 2008	<p>Copies of all submissions received by Council during the public notification process were provided to the proponent, including:</p> <ul style="list-style-type: none"> ▪ Fairfield City Council. ▪ Housing NSW. ▪ Transport agencies – Ministry of Transport, Roads and Traffic Authority. ▪ Service providers – Sydney Water, Integral Energy. ▪ Sydney South West Area Health Service - NSW Health. ▪ Non-government organisations. ▪ Sporting clubs.

- Existing residents.

It is acknowledged that the Fairfield City Council submission was prepared on behalf of Council's corporate or civic interests and is not related to Council's role as the assessment authority. Further, Council's submission included a separate document prepared by HERE architects, which peer reviewed the urban design component of the application.

27 February 2008

The proponent made a presentation to the Independent Hearing and Assessment Panel (IHAP) to brief the Panel members regarding the background to the project and discuss the fundamental issues associated with the Concept Plan and their application in the 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, including separate meetings with various members of Council's submissions and assessment teams and ongoing discussions regarding the format and content of the Voluntary Planning Agreement and the expected timeframe for infrastructure delivery.

24 April 2008

Correspondence was issued by Council providing specific comments regarding the assessment of the Concept Plan and Stage 1 Project Application, some of which was previously provided in Council's correspondence dated 8 February 2008:

- Submissions to the Proposal.
- IHAP (Concept Plan & Stage 1 Project Application).
- Bonnyrigg Masterplan & Draft Development Control Plan 2007.
- Urban Design (Stage 1 Project Application).
- Density (Concept Plan & Stage 1 Project Application).
- Car Parking (Concept Plan & Stage 1 Project Application).
- Width of Narrow Streets (Concept Plan & Stage 1 Project Application).
- Open Space Issues (Concept Plan & Stage 1 Project Application).
- Traffic Access (Stage 1 Project Application).
- Stormwater and Drainage Issues (Concept Plan & Stage 1 Project Application).
- Acoustic Issues (Concept Plan & Stage 1 Project Application).
- Social Impact (Concept Plan & Stage 1 Project Application).

This PPR identifies each of the key issues raised during the assessment process and provides a comprehensive response to each of these issues, as outlined in **Section 6**.

4 Site Description

4.1 Part 3A Concept Plan

Bonnyrigg Estate is a large residential housing estate generally bounded by Bonnyrigg Avenue, Bonnyrigg Public School, Bonnyrigg Plaza, Edensor Road, Humphries Road, Cabramatta Road and Elizabeth Drive as in shown **Figure 1**.

The Part 3A Concept Plan applies to the 833 social housing dwellings located within the Bonnyrigg Estate, including 802 public housing dwellings and 31 community housing and Aboriginal housing dwellings, which are scattered around the estate.

There are also 86 privately owned dwellings within the estate, including a cluster of recently constructed dwellings in the central section of Tarlington Parade at Louisa Place and Emma Close and other dwellings scattered throughout the estate. It is important to note that the privately owned housing does not form part of the Part 3A Concept Plan.

A description and analysis of the site and surrounds, including the local and regional context, is provided in the Bonnyrigg Masterplan included at **Appendix 1**.

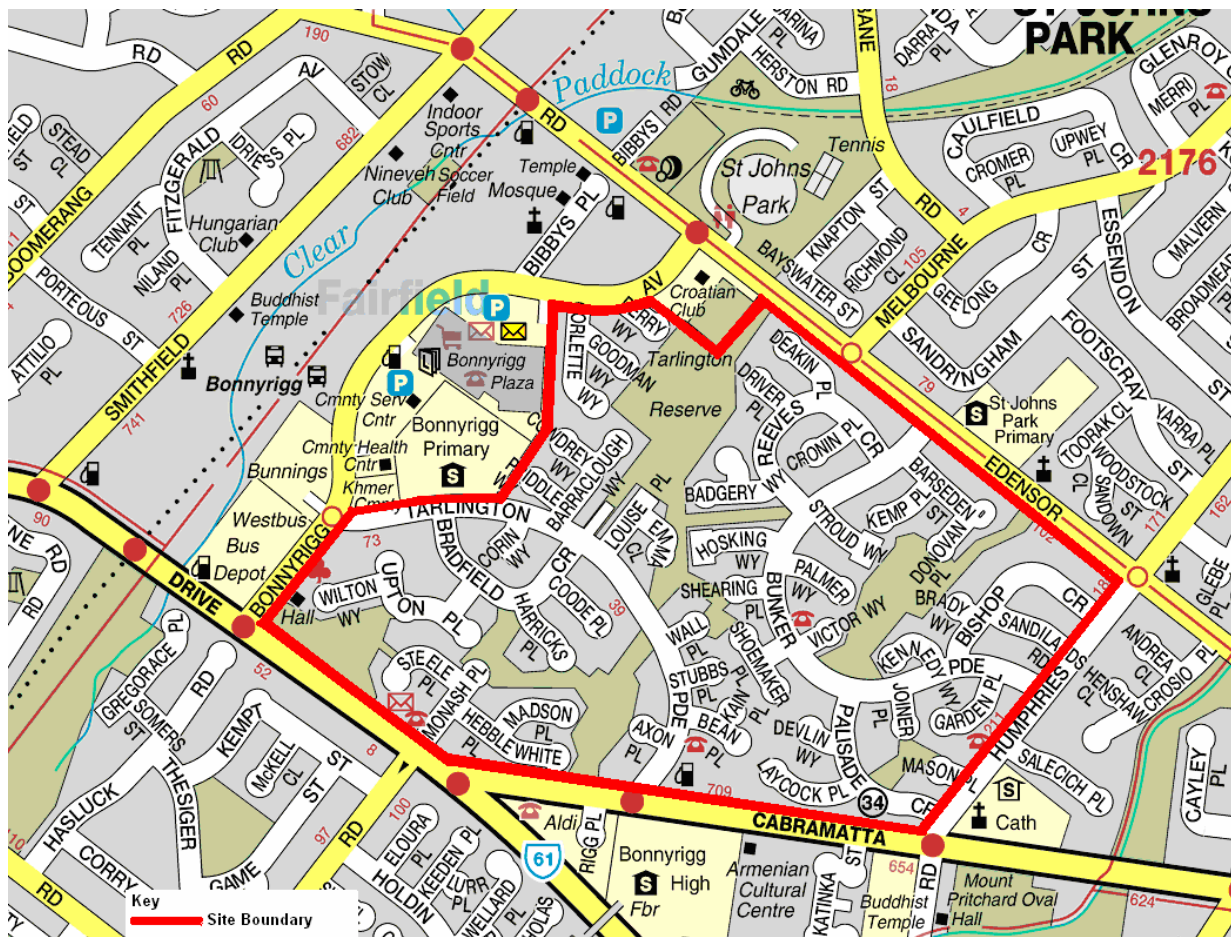


Figure 1 – Extract of UBD Map

4.2 Stage 1 Project Applications

The Stage 1 Project Applications applies to land generally located in the north eastern corner of Bonnyrigg Estate as shown in **Figure 2**.

This area of land currently comprises the following features:

- 60 existing social housing dwellings, including 59 public housing dwellings and one Aboriginal housing dwelling.
- Open space including Tarlington Reserve which consists of two full sized soccer fields.
- Roads including Deakin Place and Driver Place as bounded by Reeves Court.

Title details of these lots are provided below:

- Lots 7 to 13 in Deposited Plan 262453.
- Lot 64 in Deposited Plan 262453.
- Lot 413 in Deposited Plan 262455.

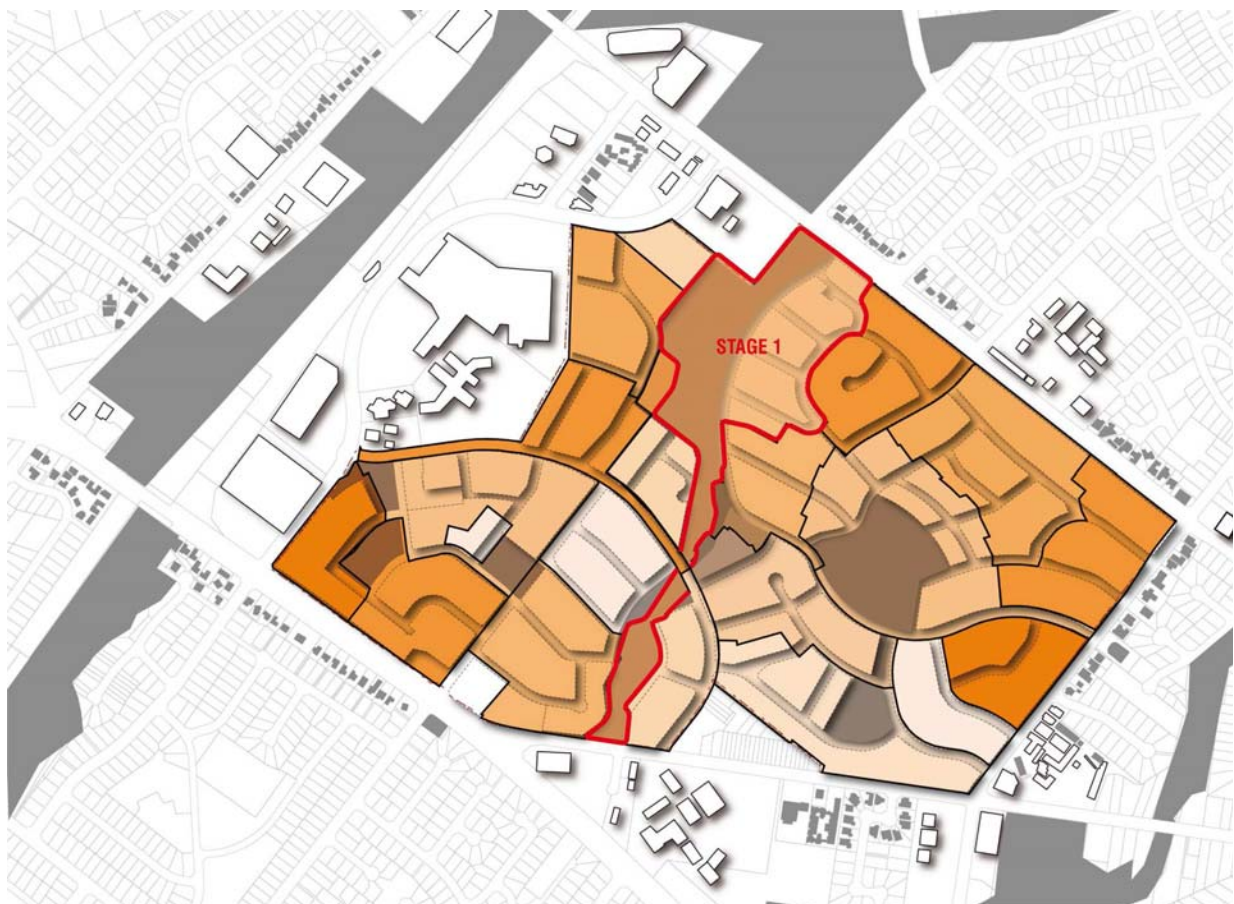


Figure 2 – Stage 1 Location Plan

5 Development Description

5.1 Concept Plan

The Concept Plan comprises:

- Demolition of existing dwellings in stages.
- Retention of privately owned homes and approximately 50% of roads.
- Allocation of land uses within the renewed estate.
- Staged construction of approximately 2,330 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 Bonnyrigg Neighbourhood Centre comprising community, retail and commercial uses.
- Reconfiguration and upgrade of existing public open space, including extensive landscaping and infrastructure to cater for a wide range different users and enhance safety and security.
- Retention and upgrade of existing roads, construction of new roads and provision of a pedestrian and bicycle movement network.
- Stormwater infrastructure works including water sensitive urban design measures to control the quantity and quality of stormwater, enhance the appearance of the site and provide passive recreation opportunities.
- Retention, extension and upgrades of existing services infrastructure to maintain supply through construction and cater for the increased population.

The capital investment value of the Concept Plan is \$460 million. The Concept Plan will create approximately 265 jobs per annum during the construction phase (total of 2,300 jobs), 111 jobs per annum arising from ongoing maintenance and 575 jobs from residential expenditure over the 20 year assessment period.

The proposed plan for the physical redevelopment and renewal of the site is detailed in the Bonnyrigg Masterplan. The Masterplan provides a detailed description of the proposal in a written and graphic format, and a series of stand-alone drawings that detail the core components of the proposal and the design rationale underpinning the development.

A copy of the Masterplan is attached as **Appendix 1**. Key changes made to the Masterplan since the lodgement of the Part 3A application in November 2007 are detailed in **Section 7.1** of this PPR.

The Concept Plan Maps including Land Use, Road Hierarchy and Staging are attached as **Appendix 2**.

5.1.1 Demolition

The Concept Plan proposes to demolish 813 of the public housing dwellings while retaining 20 dwellings owned by Housing NSW. It is noted that all 86 privately owned homes will be retained.

Demolition will be undertaken in accordance with the Demolition Staging Plan included in the Masterplan.

5.1.2 Land Use Distribution

The Concept Plan proposes the total redevelopment and renewal of the existing public housing estate, which currently comprises low density residential development and local public open space.

Residential development will continue to be the dominant land use. The existing public open space will be reconfigured to address the local road network and better meet the needs of the local community. A multi-purpose centre comprising community, retail and commercial activities will also be accommodated in the centre of the site. The proposed distribution of activities is shown in the Land Use Map at **Appendix 2**.

The existing site will be resubdivided by torrens title, strata (stratum) title or community title, depending on the dwelling type to be constructed. The Bonnyrigg Living Communities Project is expected to produce a total yield of approximately 2,330 dwellings. The anticipated dwelling mix per dwelling type is indicated in **Table 1**.

Table 1 – Concept Plan Dwelling Yield and Mix

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%)
100%	Total	2,332	2,332	1,633 (70%)	699 (30%)

5.1.3 Residential Development

The Concept Plan proposes a mix of dwelling types, including:

- Detached dwellings.
- Attached dwellings designed and constructed in a variety of types including row housing, townhouses or in a 'plex' arrangement. The 'plex' arrangement has been purpose designed to cater for the density, population needs, the requirements of Housing NSW, and the special character sought for the renewed area. The 'plexes' essentially comprise single buildings, predominantly of two storey height with some limited three storey elements provided in selected locations, within which either 2, 3, 4, 6 or 8 attached dwellings are provided.
- Apartment buildings, located in selected precincts and constructed to a maximum height of six storeys.

Indicative perspectives of the proposed housing are provided in the Bonnyrigg Masterplan attached as **Appendix 1**.

5.1.4 Bonnyrigg Neighbourhood Centre

The Bonnyrigg Living Communities Project will include the development of a neighbourhood centre, comprising community, retail and commercial activities, to be located approximately in the centre of the site, between Tarlington Parade and Bunker Avenue and adjacent to the valley park.

The following activities are anticipated to be provided within the neighbourhood centre:

- The offices of Bonnyrigg Partnerships, including tenancy management services and a central base for personnel involved with the Living Communities Project.
- A community centre, which will provide flexible office space and meeting rooms to cater for a wide range of community groups and users.
- A limited range of retail and commercial uses that will serve the needs of local residents and employees, which could include a child care centre, medical centre, convenience retail and cafe.
- A community garden, which will be developed in conjunction with local residents.

Indicative / concept plans of the proposed multi-purpose centre are provided in the Bonnyrigg Masterplan attached as **Appendix 1**.

5.1.5 Public Open Space

The Concept Plan proposes to reconfigure and rationalise the existing public open spaces so that the open space network better meets the needs of existing and future residents with regard to the quantity of open space and the quality of open space, including passive and active recreation opportunities. A series of public open spaces of varying sizes and dimensions are proposed as listed below:

- Entry Park.
- Lower Valley Creek Sports Park.
- Valley Creek Community Centre Park.
- Upper Valley Creek Park.
- Bonnyrigg Avenue Entry Park.
- Village Park.
- Forest Park.
- Hilltop Park.
- Junior Play Park.

All parks will be bound by new and existing roads to promote passive surveillance and increased use of these spaces which are currently under utilised.

Further details regarding the proposed public open space network, including infrastructure provision and landscape treatment, is provided in the Bonnyrigg Masterplan attached as **Appendix 1**.

5.1.6 Access Network

The Masterplan maximises the retention and upgrade of existing roads, mainly through the retention of the privately owned dwellings, while providing a range of new streets for improved accessibility across the site, particularly between the eastern and western portions, which do not currently provide a vehicle connection.

The majority of the two main roads on the site, Tarlington Parade and Bunker Parade, will be retained. However, Bunker Parade will be realigned to form the boundary of the valley park (currently known as

Tarlington Reserve). The Masterplan promotes better integration with surrounding parts of Bonnyrigg so that the estate is not excluded from the neighbourhood as is currently the case.

The proposed road hierarchy for the renewal project is provided as follows:

- Local collector roads including:
 - Existing 18 metre roadway including shared way.
 - Proposed new 18 metre roadway including shared way.
 - Proposed new 15.5 metre roadway including shared way.
 - Proposed new 15 metre roadways.
- Local access streets including:
 - Existing 20 metre street way including shared way.
 - Existing 18 metre street way including shared way.
 - Existing 15 metre access street way.
 - Proposed new access street way.
 - Proposed new 12 metre street way along parks.
 - Proposed new 10.5 metre street way along parks.
- Local access places including:
 - Existing 15 metre access place.
 - Proposed 8 metre access place.

An integrated pedestrian and bicycle network is also proposed, which is integrated with the road network and the public open space, to provide connections between the residential area and key local activity nodes, including Bonnyrigg Town Centre, the Liverpool to Parramatta Bus Transitway, local schools, the regional cycleway network and the like.

Details are summarised as follows:

- Upgraded and resealed roads – approximately 4,500 metres in length and 74,000m² of resealed pavement.
- New roads – approximately 8,200 metres in length and 105,000m² of constructed pavement.
- Pedestrian / cycle network – approximately 27,400m² of new or replaced street footpath, including shared pedestrian /cycle links.

It is also proposed to improve the amenity of the movement network. Street trees will be planted to enhance the appearance of the site and provide shading of vehicles, pedestrians and cyclists. Laybacks in kerbs will be provided so that people with disabilities, the elderly and / or pedestrians with strollers can easily manoeuvre around the site.

The proposed road network is shown in the Road Hierarchy Plan at **Appendix 2**.

5.1.7 Utilities and Services

The Bonnyrigg Living Communities Project is to be constructed in stages and in a manner that ensures that demolition and construction activities are undertaken with minimal disruption to the existing services and that sufficient capacity is available within the existing and upgraded networks to accommodate the development in each stage.

A summary of the proposed services and utilities is provided as follows:

- 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 pipe and provisions 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.
- 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.

5.1.8 Land Tenure and Ownership

Bonnyrigg Estate is predominately owned by Housing NSW, while Bunker Parade Reserve is owned by Fairfield City Council. 86 dwellings located throughout the estate are under private ownership. This Concept Plan applies only to the land owned and / or controlled by Housing NSW and does not include the privately owned land.

The Concept Plan proposes that the renewal of the existing public housing estate will comprise a mixture of private and public dwellings, as described previously in **Section 5.1.2**.

5.1.9 Staging

The Bonnyrigg Living Communities Project is anticipated to be undertaken in 18 stages over a 13 year period to maximise community retention and future community capacity building while minimising disruption to the existing community. The proposed staging will also minimise lead-ins and the number of temporary rehousing moves for residents, temporary connections or dependency upon undeveloped stages for service and access provisions.

The proposed staging of the development also enables an incremental upgrade of existing community services and other infrastructure works proposed as part of the voluntary planning agreement to be phased in as the population increases.

Further, it is noted that each stage within the project may be constructed in precincts to enable staged construction certificates to be issued throughout the project.

The overall proposed staging plan for the 18 development stages, including indicative dwelling yields for each stage, is shown in the Staging Plan at **Appendix 2**.

5.1.10 Key Development Statistics

Some of the key statistics relating to the proposed development are summarised in **Table 2**.

Table 2 – Key Development Statistics

	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%

5.2 Stage 1 Project Applications

The Stage 1 Project Applications comprise:

- Construction of 106 dwellings, comprising a mixture of two storey attached and detached homes, with a minor three storey building element to one dwelling.
- Subdivision into 106 lots, comprising a mix of torrens title, strata (stratum) title and community title lots, depending on the dwelling type to be constructed.
- Retention and upgrade of existing roads, realignment and extension of Bunker Parade and construction of new roads.
- Reconfiguration of the existing park in the central valley (part of which is currently known as Tarlington Reserve) and provision of public infrastructure.
- Stormwater infrastructure works including construction of a stormwater detention facility in the proposed central valley park.
- Retention and extension of existing services infrastructure.

The capital investment value of Stage 1 of the Bonnyrigg Living Communities Project is \$31 million.

Changes made to the Stage 1 Project Applications since the lodgement of the Part 3A application are outlined in **Section 7.3** of this PPR.

Separate Project Applications are proposed for the subdivision and construction works to enable the certification of each component of work by an appropriately qualified private certifying authority.

5.2.1 Subdivision and Road Layout

Stage 1 comprises the creation of 106 new lots, comprising a mix of torrens title, strata (stratum) 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 to Bunker Parade. The proposed road layout will create better accessibility and movement across the site for all traffic.

An updated Subdivision Plan prepared by Vince Morgan Surveyors is attached as **Appendix 12**.

5.2.2 Dwelling Construction

Stage 1 comprises a mixture of detached and attached dwellings with a predominant maximum height of two storeys, with a minor three storey building element to one dwelling. No lifted apartment buildings are proposed. Updated Stage 1 Architectural Plans prepared by Billard Leece are attached as **Appendix 19**.

Stage 1 will produce a total yield of 106 dwellings. The dwelling mix is indicated in **Table 3**.

Table 3 – Stage 1 Total Dwelling Yield and Mix

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%	Total	106	106	71 (67%)	35 (33%)

5.2.3 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.

Updated Stage 1 Landscape Plans prepared by EDAW are attached as **Appendix 20**.

5.2.4 Stormwater Infrastructure

A stormwater detention basin with approximately 8,000m³ 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 2,600m².
- 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.

Updated Stage 1 Infrastructure Plans prepared by Hughes Trueman are attached as **Appendix 21**.

5.2.5 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 approximate 800 metres of conduit and cabling and two new pad mount substations are to be provided in Stage 1.

5.3 Voluntary Planning Agreement

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, 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.

5.4 Proposed Amendments to Planning Controls

The Environmental Assessment Report outlined in detail the proposal to amend Fairfield Local Environmental Plan (LEP) 1994 and Bonnyrigg Town Centre - Development Control Plan (DCP) No 28 so that the provisions of the LEP and DCP are consistent with the provisions of the Concept Plan and Stage 1 Project Application.

The amendment of the LEP will include a zone boundary adjustment to reflect the reconfiguration of the existing open space and an expansion of the uses currently permitted in the 2(a) Residential zone. The DCP will be amended to extend the application of DCP 28 to cover the entire estate and to introduce controls which will enable the renewal of the estate to occur in accordance with the provisions of the proposed Masterplan and the Concept Plan.

No changes are proposed to the approach outlined in the Environmental Assessment Report, however, it is considered appropriate to re-establish the preferred approach and drive the consideration of these plan amendments as they will be of significant importance in realising the sales of the private dwellings and the future renewal of the estate, as outlined in **Section 10** of this PPR. The details of the final form of the LEP and DCP to cover the estate are subject to further discussion and agreement between the proponent, Fairfield City Council and the Department of Planning.

6 Identification of Key Issues and Responses

6.1 Overview

The Environmental Assessment prepared in association with the Part 3A application for the Bonnyrigg Living Communities Project was made publicly available for a total of 58 days between 19 December 2007 and 15 February 2008.

This section of the PPR outlines the key issues arising from both the preliminary assessment of the Concept Plan and Stage 1 Project Application by Fairfield City Council and a review of each of the submissions arising from the public notification process.

The key matters raised by Fairfield City Council during the preliminary assessment of the Part 3A application were articulated in correspondence dated 8 February 2008 and 24 April 2008. A comprehensive response to each of these matters is provided in **Section 6.2** of this PPR.

Each of the issues raised by the public authorities and agencies, non-government agencies, local interest groups and the existing and surrounding residents and land owners during the notification of the Part 3A application is also addressed. The key matters for consideration are discussed in detail in **Section 6.3** of this PPR.

It is noted that Bonnyrigg Partnerships has found the feedback to be constructive and has made significant amendments to the Concept Plan and Stage 1 Project Applications to optimise the outcome of the proposed development on the site.

6.2 Fairfield City Council (Delegated Assessment Authority)

Three key issues were identified in the preliminary assessment of the application as outlined in correspondence prepared by Fairfield City Council and dated 8 February 2008, including:

- Urban Design.
- Width of Narrow Streets.
- Car Parking.

Additional correspondence prepared by Fairfield City Council and dated 24 April 2008 was issued to clarify the matters that had been resolved and the additional documentation requirements to be addressed in the preparation of the PPR, including:

- Submissions to the Proposal.
- IHAP.
- Bonnyrigg Masterplan & Draft DCP 2007.
- Urban Design.
- Density.
- Car Parking.
- Width of Narrow Streets.
- Open Space Issues.
- Traffic Access.
- Stormwater and Drainage Issues.
- Acoustic Issues.
- Social Impact.

Each of these matters is addressed in the following sections of the report.

6.2.1 Submissions to the Proposal

Each of the issues raised by the public authorities and agencies, non-government agencies, local interest groups and the existing and surrounding residents and land owners during the notification of the Part 3A application have been addressed in **Section 6.3** of this PPR.

6.2.2 IHAP

The comments made by the Independent Hearing and Assessment Panel during the informal briefing held on 27 February 2008 (and the minutes subsequently provided on 29 February 2008) have been considered and taken into account as part of the revised Bonnyrigg Masterplan and Stage 1 Project Application Architectural Drawings, which are considered in detail in **Section 6.2.3** and **Section 6.2.4**.

Further, a formal presentation and hearing is scheduled to occur in July 2008 whereby IHAP will be presented with the proposed changes with the Concept Plan and their application in the Stage 1 Project Application. Additional summary documentation may be prepared and lodged with Council prior to the meeting to assist the Panel members in their understanding of the revised proposal.

6.2.3 Bonnyrigg Masterplan

The comments made by Council with regard to the assessment of the Bonnyrigg Masterplan have been given full and detailed consideration.

A number of amendments to the Masterplan have been made in response to the issues raised by Council, which are outlined on the following pages. However, it is also considered important to understand the background to the preparation of the Masterplan and the rationale underpinning the principles and guidelines articulated in this document.

The preparation of the Bonnyrigg Masterplan was based on a rigorous and thorough design process, including detailed investigations and analysis of a range of specialist studies, demographic analysis, community consultation, market research and financial modelling. In addition, the Masterplan and the detailed design of the new dwellings was prepared having regard to the detailed specific requirements of Housing NSW and extensive market research and focus groups and having regard to relevant state and local planning policies and controls.

The unique and special character of the Bonnyrigg Living Communities Project necessitated a 'first principles' approach to the masterplanning and detailed design of the area. The Masterplan has sought to plan for the renewal of the area based on a deep appreciation of the needs of the current and future community and adopting a specific approach to physically accommodating the community. The Masterplan does not attempt to apply generic planning controls and guidelines, such as contained in the Fairfield City Council City Wide Development Control Plan, instead, the Masterplan has developed specific approaches to built form outcomes appropriate to the site, which have been informed by Council and other relevant planning policies and controls.

The Bonnyrigg Masterplan is a guiding document setting the desired future direction and development design guidelines that are proposed to be relied upon to achieve the desired urban renewal. It is anticipated that the detail of the Masterplan will be continually reviewed over time and in response to changing community and spatial needs. Having regard to the need for development regulation and controls, it is proposed that the key development design controls will be reflected in an appropriate Development Control Plan (currently proposed as an amendment to DCP 28) and the future stages of the project will be assessed against the DCP under the provisions of Part 4 of the Act.

The principles contained within the Masterplan have been designed to deliver an appropriate and consistent outcome for the site, taking into account a wide range of criteria, including the site context, amenity considerations, safety and security, social needs and impacts, environmental criteria and the like. The Masterplan is structured to provide the following:

- Summary of some of the key government and project objectives that inform the design for the physical renewal of the area.

- Detailed contextual analysis of the site and surrounding areas.
- Identification of the principles guiding the renewal, and being focussed around the following key areas:
 - Movement and connection.
 - Open space.
 - Built form.
 - Character.
 - Safety and security.
 - Environmental sustainability.
- Identification of the design guidelines adopted for the planning and development of the public realm.
- Identification of the design guidelines adopted for the planning and development of the private realm.

In response to submissions received since the lodgement of the Part 3A application, significant changes have been made to the form and content of the Bonnyrigg Masterplan, particularly relating to the design guidelines adopted for the public and private realms.

The changes to the public realm controls (Part 4) have focussed primarily on simplifying the controls for ease of future interpretation, correcting anomalies, clarifying the wording of certain controls and to provide more certainty and consistency in the delivery of the intended urban design outcomes arising from the ongoing review of the planning and implementation of roads, open space and other public domain elements. The changes provide major improvements to the quality of the streetscape.

The private realm (Part Five) provisions of the Masterplan have also been significantly reviewed with amendments made to ensure the controls provide clear and appropriate design controls for the attached and 'plex' type dwellings proposed to be constructed in the renewed area. A review of the provisions (as amended) has confirmed that the design guidelines are consistent with the approach adopted in comparable areas and will ensure appropriate levels of amenity and environmental outcomes.

Specific responses to Council's comments made with regard to the assessment of the Masterplan are provided below:

- ESD – the Masterplan has been amended to provide direction on how the BASIX targets will be achieved based on the recommendations provided in the ESD reports prepared by Advanced Environmental. Further, the revised Masterplan clarifies the provisions for solar access and the ESD reports prepared by Advanced Environmental have been amended to include clarification of the term 'daylight factor' to determine solar access and submitted with the PPR.
- ESD – the use of gas boosted solar hot water systems are required to achieve the 'stretch' targets and will be used, where feasible. Alternatively, gas instantaneous hot water systems (which achieve the 'base' targets) will be used.
- ESD – details on the proposed water recycling option is provided in the updated Water Cycle Management Report prepared by Hughes Trueman included at **Appendix 7**.
- Private and Communal Open Space –the proposed minimum private open space requirements for ground floor and first floor dwellings are appropriate and consistent with the approach adopted in comparable developments. The provisions relating to the amount of communal open space, soft surface landscaping, building footprint and deep soil zone have been clarified in the revised Masterplan.
- Cut & Fill – the proposed development has been designed to follow the natural topography of the locality, however, in some cases it may be necessary to construct dwellings on building platforms

which require a maximum level of fill of 1000mm. Potential adverse amenity impacts resulting from this level of fill are considered to be negligible given that these areas of the estate do not directly abut any residential properties.

- Vehicle Access and Car Parking – on-site and visitor car parking is addressed in **Section 6.2.7** of this PPR.
- Storage – internal layouts of dwellings have been amended to provide increased storage, where required.
- Apartment Precincts – detailed controls for the apartment precincts will not be provided in the Masterplan as they will be designed in accordance with State Environmental Planning Policy No. 65 (Design Quality of Residential Flat Development) and the Residential Flat Design Code.
- Building Envelopes – site coverage and setback controls (including building envelope and setbacks and dimensions of garages) have been clarified in the revised Masterplan.
- FSR – an overall FSR control for the development is not proposed to be adopted as it is considered that the revised built form controls in the Masterplan provide a clear structure to guide the form of future development within the estate without the need for a prescriptive FSR control.

Major changes to the Masterplan are summarised as follows:

Lot Size

- A simplified table of standards has been prepared describing the minimum lot width, depth, and number of street frontages required to accommodate the various attached and detached dwelling forms proposed in the Masterplan.
- Minor changes have been made to the specified standards to better reflect the allotment configurations proposed for the area. Minimum lot widths have been varied where it has been demonstrated that the environmental and amenity standards can be met or exceeded.

Site Coverage

- This standard has been modified to clarify that a minimum of 35% of the area of each allotment will be set aside as landscape area (including soft and hard landscaping but excluding garages and car parking spaces). A minimum of 30% of the total landscape area is required to be deep soil area.
- The building footprint control has been amended to reduce the maximum permitted building footprint on sites to be 65% (including garages and car parking spaces). This is a significant reduction from the 75% coverage proposed in the original Masterplan and will help to assure greater private and public amenity for residents.

Streetscape

- The wording of these standards has been simplified, however, no significant change to these guidelines has been made.

Bulk and Scale

- The reference to a specific building height (a maximum roof height of 9 metres) has been deleted, and the guidelines reworded - *'predominate building height of two storeys with some three storey elements permitted in select locations'*.
- This change removes an arbitrary and unnecessary height control and provides a clear reference to achieving mainly two-storey development.

Setbacks

- The wording of these standards has been simplified, however, no significant change to these guidelines has been made.

Privacy

- The wording of the visual and acoustic privacy guidelines has been simplified, however, no significant change to these guidelines has been made.

Safety

- The wording of these standards has been simplified, however, no significant change to these guidelines has been made.

Private Open Space

- The wording of these standards has been simplified, however, no significant change to these guidelines has been made.

Fencing

- The fencing guidelines specified in the original Masterplan have been deleted and re-worded - *'fencing being constructed in accordance with the site fencing strategy'* to provide a comprehensive design code for this built form element.

Retaining Walls

- The wording of these standards has been simplified, however, no significant change to these guidelines has been made.

Garages and Car Parking

- The wording of these standards has been simplified, however, no significant change to these guidelines has been made.

Service Areas

- The wording of these standards has been simplified, however, no significant change to these guidelines has been made.

Storage

- This standard has been modified to require all storage areas to be provided within dwellings (or garages), which is a more appropriate standard than the guideline offered by the original Masterplan, which proposed that 50% of storage could be located external to dwellings.

Cut and Fill

- The wording of these standards has been simplified, however, no significant change to these guidelines has been made.

Solar Access

- These standards have been modified - *'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 21 June'*.
- This standard is consistent with daylight standards adopted for comparable density development in other areas and is more stringent and appropriate than the standard proposed in the original Masterplan.

Natural Light

- The standard has been amended to remove reference to SEPP 65 standards (which do not apply to the attached and detached dwellings proposed in the Masterplan) and to provide an appropriate level of natural light be achieved in each dwelling.

Apartments and Seniors Living

- The Masterplan has been amended - *'The design of these forms of housing will be subject to existing design controls and guidelines, including SEPP 65 and the accompanying Residential Flat Code and the SEPP Seniors Living.'*
- This confirms that such development will be subject to design codes and standards already adopted for such development and that the Masterplan does not seek to introduce design controls unique to these forms of development.

The design principles and controls contained within the revised Masterplan will be included within the draft DCP to ensure that all future development within the estate, including the privately owned dwellings that are not subject to the Concept Plan, is of a consistent built form and of a high quality that meets the identified design, social, environmental and economic objectives.

6.2.4 Urban Design (Stage 1 Project Application)

The comments made with regard to the assessment of the Urban Design of Stage 1 have been given detailed consideration, as outlined below.

Built Form

The dwellings proposed in the Stage 1 Project Application have been subject to an extensive and rigorous assessment process, including:

- Peer Review of Urban Design Concepts and Guidelines of the Bonnyrigg Living Communities Concept Plan and Project Application (Stage 1) prepared by HERE Architects and dated January 2008.
- Review of submissions received arising from the public notification of the Part 3A application from 19 December 2007 to 15 February 2008.
- Feedback arising from a briefing presentation to the Independent Hearing and Assessment Panel on 27 February 2008.
- Planning compliance assessments undertaken by Council staff in accordance with the provisions of Fairfield City-Wide DCP, DCP No 28 - Bonnyrigg Town Centre and the proposed draft amendments to DCP No 28 - Bonnyrigg Town Centre.
- Ongoing discussions between the proponent and Council staff.

A detailed design review was subsequently undertaken by the project architects, taking into account the concerns raised in Council's correspondence and additional issues raised during the assessment process outlined above, and revised architectural drawings are submitted with the PPR, responding to each of the issues as summarised below:

- The elevation treatments have been further refined to provide for more variety between the individual dwellings and accommodate more unique features which assist in providing greater legibility between the dwellings and greater interest and character in the streetscape. This approach is consistent with the outcomes of the market research undertaken with potential private purchasers, which identified the importance of providing solid, brick built, pitched roofed homes whilst providing identifiable features which foster a sense of ownership and pride.
- A rigorous analysis has also been undertaken of the proposed roof treatment to provide for further differentiation between the dwellings and to simplify the construction process. In particular, it is noted that some skillion roofs are provided to introduce a more contemporary form of dwelling within Stage 1 and create greater variety within the dwelling mix.
- The proposed 'third storey elements' to dwellings scattered throughout the estate, which comprise a bedroom and an ensuite bathroom, will provide some variety in building heights and create a sense of identity and differentiation within the streetscape. Dwellings with third storey elements will be located where they will not have an unacceptable impact on bulk and scale, solar access, overshadowing and privacy.
- The selection of materials has been reviewed and some changes to the external colour schedule, including metal roofing to some dwellings, are proposed to provide variety for dwellings in Stage 1. An updated Indicative Materials and Finishes Report prepared by Rust Architecture and Design is attached as **Appendix 22**.
- Entry thresholds to all dwellings have been strengthened through the provision of various design elements including covered entries to create a sense of identity.
- The dwellings adjoining the access places have been sited and designed to maximise passive surveillance of the access streets (i.e. pedestrian access to dwellings, front door, living room and window placement, fencing treatment) and minimise dominance of streetscapes by garage doors.

- The siting and design of individual dwellings have been subjected to a rigorous review and the original drawings have been amended to ensure that the proposed built form optimises solar access opportunities and access to natural daylight and minimises potential overshadowing impacts of private open space of the dwellings and adjoining or nearby properties.
- A revised streetscape strategy has been prepared by the proponent to substantially improve the visual continuity of the Masterplan. A greater focus on the space between buildings has resulted in stronger features forming a consistent street frontage through an ordered and quality design of front garden boundary treatments. This is consistent with delivering completed stages of homes and public realm rather than a land and home sales approach that leaves many lots undeveloped for long periods of time.

It is noted that there the external design and public realm treatment will be indistinguishable between public and private dwellings.

The amended streetscape represents a significant change and improvement to the original scheme submitted to Council in November 2007 by drawing from a wide ranging examination of contemporary and planned new residential estates. It is considered that the control and implementation of a prescribed hierarchy of streetscape designs throughout the project to all dwellings will deliver a cohesive and sustainable design outcome far better than comparable 'house and land' broad acre schemes where streetscape designs are difficult to enforce.

Overall, it is considered that the proposed built form satisfactorily addresses the issues raised in the submissions and the revised architectural drawings provide an appropriate response to the matters raised by Council.

Amenity

A core objective for the design of the dwellings within Stage 1 has been to achieve a satisfactory level of residential amenity, taking into account both internal and external considerations.

The Concept Plan proposes to renew the estate over 18 stages in a 13 year period and it will be imperative to clearly demonstrate the living standards and residential amenity provided within the 106 dwellings to be built in Stage 1 to facilitate the sale of these dwellings, as well as the dwellings in future stages of the development.

It should be noted that there are a number of constraints in optimising the amenity of the dwellings, taking into account the retention of the local road network, the privately owned dwellings and the safety and security considerations which are of significant importance in the renewal of the estate.

It is acknowledged that the original dwelling designs lodged with the Stage 1 Project Application did not adequately respond to the provisions of the Bonnyrigg Masterplan and optimise the potential amenity of each dwelling. A detailed design review was undertaken, taking into account the concerns raised by Council, key stakeholders and the public, to improve the residential amenity within Stage 1 including:

- Solar access.
- Safety and security.
- Privacy.

The revised architectural drawings submitted with the PPR have optimised the site opportunities and provide a high level of residential amenity in relation to solar access, privacy and safety and security.

The response to each of the issues raised with regard to internal and external amenity is provided below.

Internal

While the design principles were sound, changes to the Bonnyrigg Masterplan have been proposed to provide for greater certainty in the delivery of appropriate levels of internal residential amenity within the

future dwellings. These changes are detailed in **Section 6.2.3** of this PPR and relate to the following provisions:

- Privacy.
- Garages and car parking.
- Storage.
- Solar access.
- Natural light.

It was recognised that the proposed dwellings in Stage 1 would benefit from modifications to improve their internal residential amenity, having particular regard to solar access and natural daylight, internal storage and visual privacy between adjoining dwellings. These changes have included:

- Solar access/sunlight – dwellings have been reoriented and amended to optimise orientation and solar access outcomes for both internal and external living areas.
- Storage – the internal layouts of dwellings have been amended to provide increased storage, where required.
- Privacy – the internal layouts of dwellings have been designed to minimise overlooking of living areas and private open spaces of adjoining dwellings. Privacy screens have been provided to the windows of habitable rooms or balconies that face the private open space, window or balcony of another dwelling.

It is acknowledged that additional issues were raised regarding the appropriateness of the proposed room sizes and the internal layout of the dwellings. While some changes have been made to individual dwellings to improve their layout, it should be noted that the proposed dwellings have been designed to meet a range of criteria, including:

- Delivery of social housing in accordance with the requirements, specifications and design guidelines of Housing NSW.
- Provision of affordable housing that is within a reasonable price range for the local market.

Overall, it is considered that the amended Bonnyrigg Masterplan is appropriate and the proposed dwellings, as modified, will provide a satisfactory level of internal amenity.

External

The design principles provided in the Bonnyrigg Masterplan are generally sound, however, some changes have been proposed to provide for greater certainty in the delivery of appropriate levels of external residential amenity for the future dwellings. These changes are detailed in **Section 6.2.3** of this PPR and relate to the following provisions:

- Lot size.
- Site coverage.
- Streetscape.
- Setbacks.
- Overlooking.
- Fencing.

From the submissions, it was recognised that the proposed dwellings in Stage 1 would benefit from some modifications to improve their external residential amenity, having particular regard to solar access to private open space, the location and configuration of private open space, visual privacy of

private open space areas, fencing and landscaping treatments within the front setbacks and external storage. These changes included:

- Solar access to private open space – dwellings have been relocated and/or reoriented to optimise solar access to private open space.
- Location and configuration of private open space – siting of dwellings have been amended to improve the location and configuration of private open spaces and where possible, locating private open space adjacent to living areas.
- Privacy to private open space – improvements have been made to dwelling designs to increase privacy to private open space including appropriate placement of windows and landscaping treatment. The two tiered fencing system proposed previously has been replaced with a more amenable fencing strategy that generally relies on landscaping to provide privacy.
- Fencing/landscaping treatment within front setbacks – a new fencing strategy has been implemented to provide a more consistent streetscape reading of the development. This strategy relies on a masonry base that is augmented by different landscaping treatments. This strategy will provide visual privacy to the front courtyards while maintaining opportunities for passive surveillance of the street.
- External storage – dwellings have been redesigned to incorporate greater amounts of internal storage. External storage has been included within garages/carports, and in a minority of cases within external storage sheds. The redesign has reduced significantly the requirement for external sheds.

Overall, it is considered that the amended Bonnyrigg Masterplan is appropriate and the proposed dwellings, as modified, will provide a satisfactory level of external amenity.

Ecologically Sustainable Design

The detailed design review undertaken with regard to the Stage 1 Project Application has facilitated a number of benefits with regard to ESD principles, including:

- Improved siting and orientation of individual dwellings to optimise solar access opportunities to both internal and external living areas having regard to constraints of developing land adjoining private dwellings and retaining roads and open space.
- Introduction of solar shading devices to individual dwellings, where necessary to reduce the potential impacts of the summer sun.
- Amendments to glazing as required to satisfy BASIX requirements.
- The certificates demonstrate that the dwellings will meet (and in some instances exceed) the minimum requirements of BASIX

Further to the above, it is noted that the Dwelling Report submitted with the Stage 1 Project Application provides for 4-star gas instantaneous hot water systems to be installed in dwellings to achieve the required targets for energy reduction. In addition, the incorporation of the recycled water reticulation scheme will substantially increase the score for reduced water consumption.

Application of State Environmental Planning Policy No 65 (SEPP 65)

SEPP 65 does not apply to the Stage 1 Project Application as the proposed buildings are limited to two storeys.

The SEPP lists ten broad principles that are intended to provide a guide to achieving good design. It should be noted that these principles do not prescribe specific controls – Clause 8 of the SEPP states *“The design quality principles do not generate design solutions, but provide a guide to achieving good design and the means of evaluating the merit of proposed solutions”*.

The principles have been applied to the Stage 1 Project Application on a merit basis with the objective of achieving a high quality design. Each of the design principles has been addressed as follows:

- **Context** – the built form, scale and design of the residential dwellings proposed in Stage 1 is considered highly appropriate for the site, having regard to the local context. The proposal provides for increased residential densities on a site located within close proximity of the town centre in a built form that will complement the residential character of the surrounding area, which predominantly comprises single storey and two storey development.
- **Scale** – the bulk and height of the proposed residential dwellings in Stage 1 has been specifically designed to complement the existing residential character of the suburb of Bonnyrigg, being the form of a large suburban home, and provide a transition between the higher density residential development proposed in future stages to the west, with the lower density development proposed in future stages to the east.
- **Built form** – the proposed design of the dwellings in Stage 1 is considered appropriate taking into account the existing local context and current market analysis of buyer needs. The realignment of Bunker Parade has provided the opportunity to orientate dwellings to the public open space and achieve a pleasant outlook and residential amenity.
- **Density** – the proposed density of the proposed development is considered entirely appropriate having regard to the location of the site and access to services as outlined in detail elsewhere in this PPR.
- **Resource, energy and water efficiency** – both the Concept Plan and Stage 1 Project Application have given extensive consideration to ESD issues, including base and stretch targets for resource, energy and water efficiency as outlined in **Section 6.3.7** of this PPR.
- **Landscaping** – extensive consideration has been given to the landscape treatment provided within the public and private domains. In particular, the dwelling design and landscape design for Stage 1 have been developed in tandem, taking into account the streetscape and internal and external amenity considerations. This comprehensive design review has resulted in a substantially improved streetscape with significant additional capital cost.
- **Amenity** – the detailed design review undertaken during the assessment of the Part 3A application addressed each of the relevant internal and external amenity considerations, having particular regard to improving sunlight access, privacy and storage to each of the dwellings. This design review has optimised the design of each of the dwellings to improve the living standards and residential amenity for future occupants.
- **Safety and security** – the development of the Concept Plan and Stage 1 Project Application both gave extensive consideration to Crime Prevention Through Environmental Design principles, having particular regard to the existing site issues associated with the Radburn design and consultation with both residents and local police. It is considered that passive surveillance has been significantly increased across the site through the realignment of Bunker Parade and the orientation and design of the proposed dwellings. Further, the use of site boundary fencing and landscaping has reinforced the public and private domain to clearly articulate the lot boundaries.
- **Social dimensions** – the dwelling mix in Stage 1 is considered appropriate taking into account the existing local context and current market analysis, with opportunity to provide greater variety in future stages, taking into account changing demographics and proximity to services. The social impacts of the proposed development, including social infrastructure needs, have been assessed to a significant amount of detail in the Social Impact Assessment submitted with the Concept Plan and it is considered that the proposal adequately responds to the social context.
- **Aesthetics** – the detailed design review undertaken during the assessment of the Stage 1 Project Application has provided greater articulation and expression to the external treatment of dwellings to address the concerns raised by the Independent Hearing and Assessment Panel and Council. It is considered that the proposed building designs and materials will provide for greater differentiation between dwellings and develop an appropriate character for the renewed estate.

While each of the principles has been considered on a merit basis, it would be inappropriate to apply the specific provisions of SEPP 65 or the 'rules of thumb' contained in the Residential Flat Design Code in a compliance assessment of the two storey dwellings proposed in Stage 1. SEPP 65 applies to

development with a height of three storeys or more, taking into account the specific impacts of development with larger numbers of dwellings, including the need for increased building separation requirements and the like, which are not relevant to the Stage 1 Project Application.

Future stages of the project comprising Residential Flat Buildings 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.

Compliance Assessment

A compliance assessment has been undertaken for the Stage 1 Project Application, having regard to the guidelines contained in the revised Bonnyrigg Masterplan. The Stage 1 Compliance Assessment Table is attached at **Appendix 6**.

A summary of the compliance assessment for the Stage 1 Dwellings is provided below:

- Lot Size – 95% of lots comply with the minimum allotment width requirement, with minor variations proposed in some instances.
- Site Coverage – all dwellings comply with the minimum building footprint requirement.
- Storage – 96% of dwellings comply with the minimum storage requirement.
- Private Open Space – all dwellings comply with the minimum private open space requirement of either 25m² (ground level) or 10m² (above ground level).
- Solar Access – 87% of dwellings comply with the minimum solar access requirement for internal living areas while 93% of dwellings comply with the minimum solar access requirement to private open space.

It is acknowledged that the proposed development in the Stage 1 Project Application will not achieve 100% compliance with the numeric requirements of the Bonnyrigg Masterplan, which is considered entirely appropriate.

The proposed dwellings substantially comply with the guidelines included in the Masterplan, as outlined in the Stage 1 Compliance Assessment Table and in the summary points listed above. The proposal achieves compliance in excess of 85% for each of the core controls, which is considered to represent a high level of compliance.

Each of the proposed non-compliances are minor and have been fully justified within the Compliance Assessment Table, taking into account the level of amenity for the nominated dwelling and where relevant, the level of amenity for the adjoining dwelling(s). Despite the minor numerical non-compliances, it may be concluded that each of the proposed dwelling units will achieve a satisfactory level of residential amenity.

Further to the above, the design principles proposed in the Bonnyrigg Masterplan are considered to be sound and appropriate. The proposed controls could have been made less stringent to achieve full compliance for the Stage 1 dwellings, however, such an approach was considered inappropriate and would be inconsistent with the rationale for the Bonnyrigg Living Communities Project.

It is considered appropriate for the constraints imposed on individual sites arising from the retention of the existing roads and privately owned dwellings and the like to be taken into account in the compliance of the proposed development rather than potentially limiting the overall standard of the renewed estate by revising the design guidelines for all dwellings to achieve 100% compliance. The design guidelines proposed in the Masterplan are considered appropriate and consistent with the approach adopted for comparable developments to achieve a high quality outcome for future residents of the renewed estate.

6.2.5 Density

Bonnyrigg is nominated as a Town Centre in the Draft Subregional Strategy for the West Central Subregion. The Draft Strategy states that Town Centres typically contain between 4,500 and 9,500 dwellings and have radii of 800 metres.

It is important to note that Bonnyrigg is not as physically large as other Town Centres identified in the Draft Strategy for the West Central Subregion and does not benefit from a high frequency rail service or a major public transport interchange, as is the case with Epping, Merrylands and the like. As such, it is considered that the lower end of the desired dwelling range would be expected in this location.

Accordingly, approximately 40% of the dwelling target for the Bonnyrigg Town Centre (2,330 dwellings) will be contributed by the Bonnyrigg Living Communities Project, which is considered appropriate, taking into account the redevelopment opportunities in the balance of the Town Centre, particularly on the land immediately adjacent to the transitway and shopping centre and the existing residential development which is likely to be retained.

The application of the 800 metre radii in defining the Town Centre boundary should not be measured from a single point. It is submitted that, the Town Centre should be defined by the way in which future development will meet the objectives of the Strategy, taking into account the local context, including:

- Access to public transport – to increase non-vehicle trips for peak hour journeys.
- Access to local services – to increase walking as a means of access to shops.
- Dwelling density targets – to realise the development potential of land within close proximity of transport and services.

Accordingly, the location and extent of the Bonnyrigg Town Centre should take into account:

- Access to the Liverpool-Parramatta Transitway by walking and cycling.
- Access to Bonnyrigg Plaza by walking and cycling.
- Redevelopment opportunities of land located within close proximity of the above facilities that would enable the dwelling target to be realised.

Based on the above, it is considered that the map shown in **Figure 3** provides an appropriate context for the definition of the Bonnyrigg Town Centre.



Figure 3 – Town Centre – 800 metre radii

The Bonnyrigg Masterplan achieves the objectives of desired state and local government planning as while the planned renewal achieves an increase in density over the entire site, the Masterplan maximises development density surrounding the Bonnyrigg Town Centre. This is achieved by focusing higher density development (illustrated on the Land Use Map included at **Appendix 2**) and comprising apartments and attached housing, in close proximity to Bonnyrigg Plaza and the transitway. It is anticipated that 1,800 of the estimated 2,330 dwellings proposed in the renewal of the estate (representing 78% of all dwellings) will be located within the Town Centre boundaries.

The planned renewal of Bonnyrigg will utilise a wide range of dwelling styles and forms. Residential flat buildings, purpose-designed seniors living complexes, a range of attached housing ('plexes' comprising 2, 3, 4, 6 and 8 attached dwellings in a wide variety of forms) and detached housing will contribute to achieving a highly diverse housing stock capable of accommodating the varying needs of the future community. There are a range of important and governing elements that have set high standards in developing an optimal Masterplan and it is noted that over 30 iterations of the Masterplan were considered to address these competing elements before the Concept Plan arrangement and disposition of typologies was settled.

Overall, the density proposed in the Concept Plan is considered appropriate and complies with the provisions of both the Sydney Metropolitan Strategy and the Draft Subregional Strategy for the West Central Subregion.

6.2.6 Access Places (Concept Plan & Stage 1 Project Application)

The preliminary assessment undertaken by Council as detailed in the correspondence dated 8 February 2008 outlined a number of issues with regard to the proposed 'access places' (i.e. Road Type 13), which were the subject of further ongoing discussions between the proponent and Council. Subsequent correspondence by Council dated 24 April 2008 confirmed that a number of issues associated with the access places, had been resolved, however, additional information was to be provided in the preparation of this PPR.

Each of the outstanding issues has been satisfactorily resolved in the refinements to the Bonnyrigg Masterplan and the drawings submitted for approval in association with the Stage 1 Project Application and as summarised below:

- The road layout and hierarchy proposed in the Concept Plan and Stage 1 Project Application does not replicate the Radburn design. The Radburn design separates pedestrian and vehicle traffic and orients the primary frontage and entrance of the dwelling to a pedestrian thoroughfare within a public open space. The Concept Plan includes the integration of vehicle and pedestrian traffic as a core element of the proposed renewal to promote improved passive surveillance and increased accessibility across the estate.

All dwellings are oriented to a primary street frontage, with only resident car parking access provided from the access places. The front doors of all dwellings are oriented to the primary street frontage with on-street car parking provided for visitors within the primary street, in close proximity to the dwelling entrance. Further, all dwellings will be provided with boundary fencing and landscaping to clearly differentiate the lot boundaries and the public and private domains and minimise potential conflicts.

- Adequate vehicle manoeuvrability and sight distances are provided to facilitate vehicle movements to and from resident car parking spaces within the access places, as previously demonstrated to Council and as submitted with the revised Stage 1 Infrastructure Report, prepared by Hughes Trueman.
- No car parking is to be permitted in the access places and 'no parking' signage will be installed following an evaluation of the parking patterns of residents. Ample on-street car parking will be provided within the primary streets to accommodate visitors and as noted above, the proposed dwellings will be oriented to the primary streets, which will further discourage visitors from parking within the access places. Sufficient car parking has been provided to accommodate the proposed renewal of the estate and the Stage 1 dwellings, as outlined in detail in **Section 6.2.6** of this PPR.
- All garbage bins will be collected from the primary street frontage and as such, service vehicles will not need to access the access places, however, it is considered that these vehicles can be accommodated, if required.
- 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 as recommended in the CPTED report.

6.2.7 Car Parking (Concept Plan & Stage 1 Project Application)

Council's correspondence dated 8 February 2008 and 24 April 2008 raised the following issues with regard to car parking:

- Non-compliance with car parking rates prescribed by the Fairfield City-Wide Development Control Plan 2006.
- Lack of visitor car parking and potential congestion arising from on-street car parking in narrow roads.
- Compliance with key strategic transport objectives for development within 400 metres of the transitway and development outside the 400 metre radius.

Each of the above matters has been addressed in detail in the updated Transport Management and Accessibility Plan (TMAP) prepared by SKM attached as **Appendix 8**.

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.

In regard to Stage 1, the majority of the dwellings have at least two off-street car parking spaces, exceeding the provisions of the Concept Plan. While no visitor car parking is provided on site, the proposed car parking arrangements are considered appropriate, having regard to the following:

- Availability of on-street car parking – the proposed road layout, including the realignment of Bunker Parade and the minor road network, will provide a significant number of on-street car parking spaces, as shown on the map provided in **Figure 4** on the following page.
- Equity of access – on-street car parking spaces are accessible to all and availability is not restricted by one person utilising the sole visitor space allocated to that building, as is the case with the application of the Council rate.

- Proximity of on-street car parking – unlike the current Radburn layout which orients dwellings towards the linear open space network, the Concept Plan and Stage 1 Project Application orients all dwellings towards the primary frontage. The building design, front door, street address, mail box and street numbering for each dwelling are all oriented towards the primary road. As such, visitors to the site will park in the primary street, in close proximity to the primary entrance to the dwelling. The access places will only be used by residents to access their allocated car parking spaces and no parking will be permitted in the access places.



Figure 4 – On-Street Car Parking – Stage 1

- Avoiding potential negative impacts of providing on-site visitor car parking – one visitor car parking space would be required per 3 and 4 plex building to comply with Council's city-wide controls. As the dwellings are oriented to the primary frontage, it would be desirable to locate visitor car parking so that it would be visible from the primary road frontage. However, there would be no net gain in the availability of car parking as the provision of a driveway to access this on-site space would likely result in a loss of one on-street car parking space. Further, the provision of this space within the site boundaries would increase the amount of hardstand area and reduce the amount of on-site landscaping.

Overall, it is considered that the car parking rates proposed in the Concept Plan are sound and have been fully justified within the TMAP and as outlined above. The provision of car parking in the Stage 1 Project Application exceeds the requirements prescribed in the Concept Plan and is considered to be satisfactory.

6.2.8 Open Space Issues (Concept Plan & Stage 1 Project Application)

The comments made by Council with regard to open space have been given detailed consideration and are addressed in detail in the Bonnyrigg Masterplan (attached as **Appendix 1**) and the Project Design Report (attached as **Appendix 9**).

The Project Design Report provides an overall landscape vision for the site and specific objectives and principles covering the provision, nature and utilisation of the open space network. The Bonnyrigg Masterplan, which sets the development guidelines for the renewal of the estate, has been prepared so that it is consistent with the detail provided within the Project Design Report.

A summary response to each of the issues listed in Council's correspondence is provided below.

Overall Rationale

The design approach is to rationalise the open space and provide facilities with new opportunities for passive and more active forms of recreation for existing and future communities. The proposed increased density within the estate will provide a new focus for open spaces and parks, with new facilities, increased access and improved streetscape resulting in a significantly improved public realm. The increased population will also promote activity within the open space network, to enhance passive surveillance of open space and parks.

The key objectives for the provision of open space in the Masterplan are as follows:

- To rationalise and increase the accessibility and safety of open space within the neighbourhood;
- To provide new parks and open space facilities that encourage active and passive use by a diversity of residents; and
- To integrate the neighbourhood open space system with the regional open space system that surrounds the site.

The Masterplan also includes a series of strategies relating to open space, which are summarised as follows:

- Retain parks and key vegetation in current locations;
- Introduce street edges and housing that fronts open spaces to increase passive surveillance of these areas;
- Introduce many and varied activities into the parks;
- Incorporate native planting to enhance fauna habitats, reduce water consumption and reduce maintenance;
- Reinststate a creek line along the length of the new valley park;
- Provide appropriate levels of lighting to all open spaces.

Function of Open Space Areas

A Program Analysis Plan of the open space network including the function of the open space areas and a summary of proposed recreational facilities is included in the Project Design Report attached as **Appendix 9**.

The key function of each park is summarised below:

- Park 1 is at the entrance to Stage 1 and provides a distinctive landscape entry statement and also serves an ecological function through the provision of bioretention raingardens to manage stormwater.

- Park 2 retains and improves the existing sports facilities and provides various additional recreational facilities and also serves an ecological function through the provision of raingardens and vegetated swales to manage stormwater.
- Park 3 provides an 'overflow' area and setting for the proposed Bonnyrigg Neighbourhood Centre.
- Park 4 is the beginning of the parks ecological responses and also provides various recreational opportunities.
- Park 5 creates a pedestrian corridor and entry and Park 6 provides opportunities for toddlers and younger children through the provision of play equipment. These parks combine to create a strong link onto Bonnyrigg Avenue and the Bonnyrigg Town Centre.
- Park 7 caters for older children through to parents and seniors, with the provision of informal green open spaces, formalised sporting areas and children's play equipment all in a structured arrangement.
- Park 8 is a reconfiguration of the existing park located at Bonnyrigg's highest point and provides a variety of recreational activities for all age groups.
- Park 9 is designed to facilitate younger children through the proposed open space and recreational facilities as well as creating a green link to Park 8.

Overall Level of Open Space

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 provision 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.

Tree Canopy Cover

The percentage canopy cover for Stage 1 has been calculated to be 39% using actual tree locations which exceeds Council's minimum requirement of 30%. 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).

Links with External Open Space Corridors

Pedestrian and bicycle connections have been included in the Masterplan which link the estate with the adjoining and surrounding infrastructure and regional open space network.

Design guidelines for the public realm, including the pedestrian and bicycle networks, are provided in Part Four of the Bonnyrigg Masterplan, which is attached as **Appendix 1**.

Definition of Open Space Terms

Specific details of each park are provided within the Masterplan including details of functionality and facilities. Further, the terminology used in the Masterplan has been clarified for ease of future interpretation.

Involvement of Sydney South West Area Health Service

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 through the renewal process to ensure that any matters relevant to health are identified and resolved.

WSUD Entry Feature on Edensor Road

Comments made in relation to the Water Sensitive Urban Design entry feature are addressed below:

- Materials will be selected to minimise graffiti opportunities and ease graffiti removal to be durable (e.g. Gabion walling).
- All stormwater drainage infrastructure has been designed in accordance with the relevant statutory safety requirements.
- Details for branding of the estate will be included as part of the Public Art Strategy.

Road Edge Along Open Space

In order to provide a physical deterrent to car access while reducing maintenance, it is proposed that Parks 1-3 will have turf batters (1:4) and the remaining parks will have a combination of strategically placed grouping of trees/shrubs and bollards in 'no mow zones'.

Bio-retention Swales

A maintenance manual for swales, as well as maintenance loads for swales, has been provided in the Project Design Report attached as **Appendix 9**.

Playgrounds

The proposed parks cater for all age groups (i.e. Toddlers 1-3, Kids 4-6 and 5-12 and Teenagers) as shown on the Program Analysis Plan included in the Project Design Report.

Shade structures have been incorporated into key locations including BBQ facilities and within parks, as outlined in the Masterplan. Appropriate tree planting will be provided, with groups of trees (including existing trees) to provide canopy shade in playgrounds.

It is noted that it is Council's practice not to fence playgrounds and as such, it is proposed to avoid fencing of playgrounds.

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 prepared for the site.

Park Furniture

The design of parks (and placement of park furniture and equipment) will be further refined as part of design development which will be submitted to Council as part of the DA for the relevant Stage under Part 4.

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 will be resolved as part of future DAs for specific parks.

Picnic Shelter

Design guidelines for shade structures in playgrounds, including safety (e.g. climbing) and material selection (e.g. graffiti and maintenance) are provided in Part Four of the Bonnyrigg Masterplan, which is attached as **Appendix 1**. Detailed plans of shade structures are provided in the Project Design Report attached at **Appendix 9**.

Pathways

Appropriate tree planting will be provided along pathways to provide shade, with groups of trees (including existing trees) to provide canopy cover. Details of the type and location of trees are shown on the Tree Masterplan included in the Masterplan attached as **Appendix 1**.

6.2.9 Traffic Access (Stage 1 Project Application)

Specific responses to each of Council's comments regarding traffic relating matters are provided below:

- The proposed access arrangements from Edensor Road to the dwellings in Stage 1 have been relocated to Deakin Place to ensure satisfactory traffic safety.
- The 6 metre wide road widening along the Edensor Road frontage has been incorporated into the Stage 1 design with the northern boundary of Stage 1 coinciding with the southern boundary of the 6 metre wide road widening.
- A splay corner has been provided at the corner of Edensor Road and new Bunker Parade.
- Vehicle access for Lot 002 from Deakin Place and Lot 008 from Reeves Crescent has been reviewed and amended to ensure satisfactory manoeuvrability and driver sight lines.
- The length of proposed car parking spaces has been amended to provide a minimum of 5.5 metres.
- The garages located within the access places which accommodate up to five car parking spaces have been amended to minimise impacts on the streetscape by incorporating a mix of garages and carports and providing a minor setback from the street.
- The existing bus stop on Edensor Road opposite proposed Road No. 1 will be relocated to enable satisfactory operation of the intersection.

6.2.10 Stormwater and Drainage Issues (Concept Plan & Stage 1 Project Application)

Council's correspondence dated 24 April 2008 raised a number of issues with regard to stormwater and drainage. Specific responses to each of Council's comments are provided below:

- The Water Cycle Management Report prepared by Hughes Trueman (attached as **Appendix 7**) has been updated to incorporate the following details:
 - The capacity, location and timing of construction of the detention basins.
 - NSW Dam Safety Committee comments on potential consequences to downstream properties in the unlikely event of a failure of the detention basins.
 - Council's Urban Area OSD Policy.
- Details of the proposed works associated with increasing the size of some of the pipes to reduce overland flow and to meet safety criteria are provided in the Water Cycle Management Report.
- Flood Risk Maps and Overland Flow Risk Maps have been undertaken for Stage 1 and are included in the Water Cycle Management Report.
- The Infrastructure Reports for the Masterplan and Stage 1 prepared by Hughes Trueman (attached as **Appendix 10** and **Appendix 17**) have been updated to incorporate the timing of construction of all the detention basins and include measures to control potential downstream flooding in Stage 1.
- With regard to roof water drainage for the proposed 3 plex and 4 plex developments, it is proposed to create Council's standard Easement to Drain Stormwater and Positive Covenant to drain roof water across the roof, along the guttering and through the stormwater pipes of the affected lot.

6.2.11 Acoustic Issues (Concept Plan & Stage 1 Project Application)

Council's correspondence dated 24 April 2008 raised a number of issues with regard to acoustic issues which are addressed below.

The Environmental Noise Assessment report prepared by Acoustic Logic 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. 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.

Tables 5 and 6 in the Environmental Noise Assessment report present two options with regard to the ameliorative treatment to satisfy the internal noise objectives:

- Table 5 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. This table assumes that there would be no other ameliorative measures with regard to acoustic impacts, other than the identified glazing treatment.
- Table 6 demonstrates the potential effect of a three metre high acoustic barrier being constructed along the full length of the Elizabeth Drive boundary. The table demonstrates that there will be no glazing requirements to dwellings if the wall is constructed.

The analysis was prepared based on a number of assumptions, including the construction of only single level dwellings, however, it should be realised that only the outcomes listed in Table 6 (arising from the construction of the three metre high acoustic wall) are dependent on the height of the buildings. The concluding comments in Section 4 state:

"It is noted that if dwellings have more than one level, then ameliorative measures on the second level (and if applicable above) will revert to the ameliorative measures presented in Table 5."

Accordingly, it is concluded that each of the proposed dwellings in Stage 1 will satisfy the internal noise objectives if window treatment is provided to the bedroom that faces the street identified in accordance with the provisions contained in the Environmental Noise Assessment report. It is noted that while windows are to be acoustically treated, they can be opened to provide natural ventilation.

6.2.12 Social Impact Issues (Concept Plan & Stage 1 Project Application)

Council's correspondence dated 24 April 2008 raised a number of issues with regard to social impacts. Specific responses to each of Council's comments are provided below:

- The Community Renewal Services Plan prepared by Bonnyrigg Partnerships (attached as **Appendix 3**) has been updated to incorporate the following:
 - Clear KPI for employment targets.
 - Enhanced mitigation strategies for children 0-12 years.
 - Impact assessment for the Indigenous community of Bonnyrigg including strategies to reduce adverse impacts.
- Appropriate measures has been incorporated into the Stage 1 dwelling designs, which will be carried throughout all stages of the development, to mitigate any adverse visual and acoustic impacts associated with higher density living. Visual privacy is achieved via the placement of windows and where necessary the provision of screening devices to ensure that upper level living areas cannot overlook ground floor private open space. Acoustic privacy is achieved in accordance with the relevant BCA requirements.
- A Rehousing Strategy will be prepared and issued to Council following the submission of the PPR. The Strategy will aim to minimise the impacts on current tenants as well as private home owners.
- An Affordable Housing Strategy will also be prepared and issued to Council following the submission of the PPR.

6.3 Key Stakeholder and Public Submissions

Written submissions were received from a range of state and local public authorities and agencies, including:

- Fairfield City Council (on behalf of Council's corporate and civic interests and including consultant reports prepared at Council's instruction).
- Ministry of Transport.
- Roads and Traffic Authority.
- Housing NSW.
- Sydney South West Area Health Service – NSW Health.
- New South Wales Fire Brigades.
- Ambulance Service of New South Wales.
- Sydney Water.
- Integral Energy.

Further to the above, a meeting was held with NSW Police Force on 14 February 2008 at Wetherill Park Police Station to discuss the proposed renewal of the estate, having particular regard to the Concept Plan and the Crime Prevention Through Environmental Design report.

It is understood that a written submission from NSW Police has not been received by Council to date, however, the comments made during the meeting have been considered in the preparation of the PPR.

Overall, the NSW Police were supportive of the Concept Plan and the adoption of the CPTED principles. They were particularly supportive of the elimination of cul-de-sacs to increase permeability of the site and create opportunities for passive surveillance.

Submissions were also received from a number of non-government organisations and local interest groups, including:

- Council of Social Service of NSW (NCOSS).
- Fairfield Migrant Resource Centre.
- Bonnyrigg Public Tenants Group.
- Bonnyrigg Private Home Owners Group.
- St Johns Park Sports Club.
- Hajduk Wanderers Soccer Club.

Further, a significant number of submissions were received from local residents and land owners, the majority of which are currently living on the estate.

Copies of all submissions received arising from the public notification of the application were provided to the proponent for review following the completion of the exhibition period.

Each of the issues raised in the submissions is listed in the Submissions Response Table, which is attached as **Appendix 5**. This table provides a summary of the issues raised in the public submissions and documents the response by the relevant specialist consultant in the proponent team.

The key issues identified in the submissions that benefit from a more detailed response are listed and discussed in the following sections of this PPR.

6.3.1 Urban Design and Dwelling Design

A comprehensive response to the urban design issues raised by Council as the delegated assessment authority is provided in **Section 6.2** of this PPR. Several of these issues raised by Council with regard to urban design and the dwelling designs for Stage 1 were also reflected in the submissions from the key stakeholders and the public during the public notification of the application.

Additional issues that were raised by the key stakeholders and the public which have not previously been addressed in this PPR, are responded to in the following section. It is noted that the Submissions Response Table attached as **Appendix 5** provides a summary of each of the responses, including those previously addressed in **Section 6.2** of this PPR.

Dwelling Mix

The submission made by HERE Architects on behalf of Council states that there is a high percentage of dwellings with three or more bedrooms and based on the Bonnyrigg Estate family types and the ageing population, a higher percentage of one and two bedroom dwellings should be considered.

A breakdown of dwelling types is not provided in the Concept Plan and as such, it is assumed that this issue is raised with regard to the dwelling mix proposed in the Stage 1 Project Application.

It is submitted that the proposed dwelling mix for Stage 1 is considered appropriate, having regard to the extensive work undertaken in association with the preparation of the Part 3A application, including demographic analysis and market research for the 70% private dwellings, as well as meeting the requirements of the project bid with Housing NSW.

The Concept Plan is to be undertaken over 13 years and future stages of the development will provide the opportunity to include a broader range of dwelling types, including apartments, taking into account the proximity of the proposed development to Bonnyrigg Plaza and the transitway, as well as current and future market conditions.

Loss of Private Outdoor Space

The Submissions Response Table attached as **Appendix 5** highlights the conflicting responses to the proposal with regard to the provision of private outdoor space.

While some existing residents have expressed a desire to retain a large private outdoor space to accommodate pets and outdoor activities, others welcome the opportunity to be accommodated in a new home which has less demanding maintenance requirements. The proposed loss of outdoor space for existing public housing tenants was recognised as a significant issue in the Social Impact Assessment and the following comments were made in this context:

Significant mitigations arise from Bonnyrigg Partnerships' proposals about improved parks and open space. There has also been a responsive attitude to those who raised concerns during consultations, and some significant amendments to dwelling designs and typology, as well as increasing the number of dwellings that have access to a yard (or to a large balcony where this is not possible). An additional community garden to the one proposed at the Multipurpose Centre is recommended to address this issue, as well as other mitigations under the Community Renewal Services Plan. (SIA, page 16)

It is noted that the desire from the existing community to retain private open space is a direct function of the existing public open space within the estate being unusable and unsafe.

The research undertaken with regard to the private purchasers has yielded a similar result. While some participants expressed a desire for large outdoor areas to accommodate family gatherings, the majority of participants were seeking a balance of good public and private open space. Some participants were also seeking to downsize to a smaller property and would be satisfied with a balcony of an appropriate size.

The proposed renewal of the estate will incorporate a variety of dwellings and a variety of private open space areas, which respond to a wide range of factors, including the existing and likely future demands of the resident population, the requirements of Housing NSW for social housing and the proximity of

dwellings to public open space. It is noted that dwellings located 400 metres or more from public open space comprise predominantly detached homes, in accordance with the Land Use Map included at **Appendix 2**.

The private open space areas for the dwellings proposed in Stage 1 ranges from 10m² for a first floor balcony of an attached dwelling to 130m² for the rear yard of a detached dwelling house, which is considered satisfactory. The proposed 10m² balconies have minimum dimensions of 2.5 metres, providing sufficient room to accommodate a table and chairs for outdoor entertaining, a small portable barbecue, pot plants and the like.

Overall, it is recognised that some of the existing residents will incur a loss of private open space and the potential impacts arising from this have been given ample consideration, particularly in the Social Impact Assessment. On balance, the proposed minimum private open space areas prescribed in the Bonnyrigg Masterplan and replicated in the draft amendment to DCP No 28 are considered acceptable to provide an appropriate level of residential amenity for both existing and future residents.

Acoustic Performance

The proposed dwellings will be designed to meet BCA requirements and avoid unacceptable acoustic impacts between dwellings, particularly with regard to the plex-style dwellings.

Cultural Issues

A number of specific cultural issues have been raised with regard to the design and layout of the future dwellings, including:

- Adoption of feng shui principles (e.g. front and back doors not aligned).
- Room layouts to accommodate cultural dress codes.
- Kitchens that can accommodate the cooking requirements of different ethnic groups (e.g. outdoor cooking facility, kitchens closed off from living/dining areas).
- Outdoor spaces that can accommodate large groups of people.

The dwellings proposed in Stage 1 have been designed to address each of these issues, as summarised below:

- Dwelling layouts have been designed to avoid the location of front doors and back doors in a straight line.
- Kitchens have been located to enable the view from the front door to be screened, should it be required, so that a visitor cannot see into the kitchen from the front door.
- Kitchens have been designed so that they can be closed off from living/dining areas if required.
- Private open space areas have been designed to be flexible, including the opportunity to utilise undercover and at grade car parking spaces to extend the available outdoor space and accommodate large gatherings.

Design Alternatives

Billard Leece has undertaken a detailed review of the design alternatives prepared by HERE architects and prepared a comprehensive response to each of the proposals.

“In any design process there are a multitude of elements that influence the outcome.

One primary driver of the Masterplan from the outset was the acceptance of the existing road pattern. The existing pattern is familiar to all and there are 86 existing dwellings in private ownership that will remain.

This has the effect of determining the orientation for many of the lots. Where possible, new roads were inserted in an east-west direction to maximise the opportunity for lots to obtain a northern orientation. However, it is fair to say that solar access cannot be optimised for all lots.

Given the history of the site, another factor given enormous weight in the Masterplan was connectivity and visibility. A street pattern that removed the cul-de-sacs and increased permeability was considered essential. The visibility of all dwellings and street address was also essential and this was further developed in the dwelling design, where primary living areas were positioned to provide very good visibility of the street. In some cases this has the effect of dislocating the primary living area from the private open space. While this is not ideal, we considered the broader urban design and visibility issues to be of higher importance in this instance.

In terms of the alternative house designs proposed by HERE Architects, we contend that these place too much emphasis on the solar access of the dwellings to the detriment of the other urban design components noted above.

2 Attached Dwellings Lot 013

The revision is accepted as a reasonable improvement and has been included.

3 Attached Dwellings Lot 009

- *It is accepted that storage will be increased for all dwellings.*
- *Living areas as proposed are considered appropriate.*
- *We do not consider that the alternative provides a better urban outcome. We accept that the solar access is better, but this result is to the detriment of the streetscape and internal planning of the dwellings is compromised.*
- *Entries are directly adjacent car parking areas and could be hidden from the street.*
- *Entries to dwellings are not directly to living areas but past bedrooms and utility areas. This is not ideal and would not be readily accepted in the market.*

4 Attached Dwellings Lot 011

- *We do not consider that the alternative provides a better urban outcome. We accept that the solar access is better, but this result is to the detriment of the streetscape and internal planning of the dwellings is compromised.*
- *Entries are directly adjacent to car parking areas and could be hidden from the street.*
- *Entries to dwellings are not directly to living areas but past bedrooms and utility areas. This is not ideal and would not be readily accepted in the market.*
- *The required parking could not be accommodated for the first dwelling.*
- *There is an unacceptable level of visibility from the dwellings onto the street.*
- *We do not consider there is any great improvement in the overlooking of POS.*
- *Storage has been increased for all dwellings.*

4 Attached Dwellings Option 1 & 2 Lot 003

- *Our comments are similar to those for the 3 Attached Dwellings, in that we do not consider that the alternative provides a better urban outcome. We accept that the solar access is better, but this result is to the detriment of the streetscape and internal planning of the dwellings is compromised.*
- *This lot has two street frontages – one to Edensor and one to Road 3. We believe that dwellings should address both if possible. The alternative proposal primarily addresses Edensor with Road 3 being dominated by cars. We do not believe this is a better urban outcome.*
- *There is an unacceptable level of visibility from the dwellings onto the street.*
- *The address to the fourth dwelling is between car spaces and garages and would generally be invisible. This is not a good outcome.*

- *Storage has been increased for all dwellings.*

We accept that there are privacy issues between some dwellings with the current proposal and these will be addressed. We are looking at improving the solar access for dwellings on this lot."

The architectural drawings submitted with this PPR have addressed the issues identified above and it is considered that the revised dwellings will deliver an appropriate level of residential amenity, taking into account all relevant internal and external amenity considerations.

Compliance with Planning Controls

The submission made by HERE Architects on behalf of Council states that the architectural design of the housing types does not satisfy the provisions of State Environmental Planning Policy No 65. As previously stated in **Section 6.2.4** of this PPR, SEPP 65 only applies to development with more than three storeys and as such, does not apply to any of the dwellings in Stage 1. It is acknowledged that future stages of the development that include lifted apartments will need to address SEPP 65.

Sections 75J(3) and 75O(3) of the Environmental Planning and Assessment Act 1979 state that the Minister may, but is not required to, take into account the provisions of any environmental planning instrument that does not apply under the provisions of Section 75R of the Act. As such, the provisions of Fairfield City-Wide Development Control Plan and Development Control Plan No 28 – Bonnyrigg Town Centre also do not apply to the proposal.

The Bonnyrigg Masterplan, which forms part of the Concept Plan, provides the design parameters for the renewal of the estate. The applications for future stages will need to be assessed in accordance with the provisions of the Concept Plan, including the Bonnyrigg Masterplan. A comprehensive compliance assessment in accordance with the key parameters contained in the Bonnyrigg Masterplan has been undertaken, as outlined in detail in **Section 6.2.4**.

It is recognised that the Concept Plan (and the Bonnyrigg Masterplan) does not apply to the privately owned dwellings and as such, an amendment to Development Control Plan No 28 has been prepared so that any future development within the land generally bound by Bonnyrigg Avenue, Bonnyrigg Public School, Bonnyrigg Plaza, Edensor Road, Humphries Road and Cabramatta Road will be subject to the same set of design controls identified in the Bonnyrigg Masterplan.

6.3.2 Safety and Security

The primary issues raised with regard to safety and security are passive surveillance and crime prevention, each of which are addressed in detail below. The Crime Prevention Through Environmental Design (CPTED) Assessment report has been updated to reflect the design changes for Stage 1 and is attached as **Appendix 15**.

Passive Surveillance

Issues raised with regard to passive surveillance, included the impact of fencing private open spaces in the front setback, the passive surveillance of the small streets and the location of front doors to the dwellings. A submission was made in support of the improved natural surveillance of the public open space areas.

A number of changes have been made to the Bonnyrigg Masterplan to incorporate improved guidelines for the treatment of the private open space in front setbacks and a revised Fencing Strategy has been prepared which is included in the Project Design Report (attached as **Appendix 9**). As a result of these changes, the architectural and landscape drawings for the Stage 1 Project Application were subsequently reviewed and amended to incorporate the above changes and improve the siting, layout and design of individual dwellings, including:

- Amendments to the proposed fencing treatment to provide consistency with the updated streetscape controls in the revised Bonnyrigg Masterplan.
- Improvements to the proposed landscaping in the front setback to improve the residential amenity of the private open space areas while avoiding detrimental impacts to the passive surveillance of the public domain.
- Changes to minimise the distance between the front boundary and the front door and to maximise the sightlines and passive surveillance of the front door.

Overall, it is considered that the proposed modifications to the Bonnyrigg Masterplan that forms part of the Concept Plan and the architectural and landscape drawings that form part of the Stage 1 Project Application approval documentation are satisfactory and will provide for improved passive surveillance.

Crime Prevention

Issues raised with regard to crime prevention were focussed on lighting within the public domain, pedestrian linkages and dwelling security.

There are conflicting views from Council and the community regarding the use of lighting to prevent crime. While the provision of lighting can assist in crime prevention in some situations by providing visibility and facial recognition, it can also facilitate the inappropriate after-hours use of the public domain and encourage anti-social behaviour.

Detailed consideration has been given to the provision of lighting within the public domain, having regard to these views, as well as the objectives of the TMAP to increase walking, cycling and public transport as a mode of transport. Currently lighting will be provided to main commuter routes and appropriate lighting will be provided to the Soccer Club, taking into account the needs of both users of the facilities and potential impacts on nearby residents

The pedestrian linkages within the Concept Plan have been designed to maximise passive surveillance and minimise the opportunities for crime. In this regard, it is considered that the realignment of Bunker Parade, the extension of the existing cul-de-sacs and the lighting of the key pedestrian / commuter routes will minimise potential opportunities for safety and security issues that arose in the previous Radburn design.

The dwellings within Stage 1 have been subjected to a detailed and thorough assessment, having regard to CPTED principles and the local context as well as consultation with the NSW Police. The updated CPTED Assessment report that reflects the design changes for Stage 1 is attached as **Appendix 15**. Appropriate lighting and dead locks will be provided for each dwelling.

6.3.3 Social Impacts and Community Services

The major issue raised in Council's original submission with regard to social impacts and community services was the location and detailed design of proposed community facilities.

Council subsequently resolved at the Outcomes Committee on 12 February 2008 that the location of the proposed community centre was appropriate. Further, during discussions regarding the Draft Voluntary Planning Agreement, it was resolved that the detailed design of the proposed community facilities would be appropriately resolved through discussions with Council and Bonnyrigg Partnerships. As such, it is considered that the major issue raised by Council with regard to the location and detailed design of proposed community facilities has been resolved.

Council's submission also identified the following information requirements:

- *Design and maintenance of assets to be dedicated to Council.*
- *Lack of a localised employment, training and economic development strategy as a component of the redevelopment.*
- *Information about the rehousing strategy.*
- *Also not provided are Affordable Housing Strategy, Community Renewal Services Plan, and Rehousing strategy.*

Each of these has been addressed as outlined below:

- All details relating to the design and maintenance of assets will be addressed in the Draft VPA.
- An employment, training and economic development strategy has been incorporated into the Community Renewal Services Plan which is included at **Appendix 3**.
- A Rehousing Strategy and an Affordable Housing Strategy will be prepared and issued to Council following submission of the PPR.

Each of the issues raised in the submissions with regard to social impacts and community services are addressed in the Submissions Response Table attached as **Appendix 5**.

6.3.4 Open Space and Recreation

A broad range of issues regarding open space and recreation were identified in the submissions and each of these has been addressed in the Submissions Response Table, which is attached as **Appendix 5**.

A number of these issues have previously been addressed in **Section 6.2.8**, having regard to the matters raised by Council. In addition, the Project Design Report prepared by EDAW (**Appendix 9**) has addressed the issues raised in the submissions in relation to open space and recreation.

6.3.5 Transport and Traffic

A number of the public authority and agency submissions address transport and traffic issues, including the Ministry of Transport, the Roads and Traffic Authority, Fairfield City Council, the New South Wales Fire Brigades and the Ambulance Service of New South Wales. The main issues raised in these submissions include the TMAP, the operation of the local road network and car parking.

A number of public submissions were also provided with regard to transport and traffic impacts, including the Bonnyrigg Private Land Owners Group, Bonnyrigg Public Tenants Group, Fairfield Migrant Resource Centre and individual submissions. The issues raised within these submissions include the width of roads, the loss of cul-de-sacs and the provision of adequate resident and visitor car parking.

Each of the issues raised with regard to the access places and car parking have been addressed in a significant amount of detail in **Section 6.2** of this PPR. The additional issues raised in the key stakeholder and public submissions are addressed below and on the following pages.

Transport Management and Accessibility Plan

A series of meetings and discussions have been held with the Ministry of Transport, the Roads and Traffic Authority and Fairfield City Council to discuss the primary transport and traffic related issues, including:

- The adequacy of the information provided within the TMAP.
- Proposed mode shift.
- Provision of public transport and bus services.
- Improved pedestrian and cycle opportunities.

A significant amount of additional documentation has been provided to each of the relevant authorities to resolve these issues and a revised TMAP has been prepared (refer to **Appendix 8**) which incorporates each of this additional documentation.

Overall, it is considered that each of the issues identified in the submissions has been satisfactorily addressed and the revised TMAP should form part of the Concept Plan approval, as indicated in the Draft Statement of Commitments provided at **Section 8.1** of this PPR.

Some of the key findings outlined in the TMAP are summarised as follows:

Achieving Mode Shift

- A list of alternative Transport Demand Management measures to increase public transport mode share and that could be applied to the Bonnyrigg estate is provided in Table 9-1 of the TMAP and include:
 - 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.
 - Various travel demand management policies or programs.
- The table also highlights those measures that have been incorporated into the development and recommends proposals to further increase mode share.

Traffic Impacts

- The proposed road network provides more connections to the surrounding regional road network. Access by services and emergency vehicles is increased and efficiency of the road network improved as local traffic is more evenly distributed across the internal road network.

- The assessment of intersection improvements was based on the traffic modelling analysis undertaken as part of this TMAP. Two future year scenarios were conducted based on the staging plan for the re-development and the full redevelopment. The results of the modelling process revealed that the intersection upgrades identified are already necessary to provide additional capacity for the existing traffic levels and hence, are required regardless of planned density of future development. Two intersections from the 2007 base model that would require capacity enhancements include:
 - Cabramatta Road / Humphries Road – additional right turn lanes for all four approaches; and
 - Smithfield Road / Edensor Road – additional through lane on both legs of Edensor Road.

Internal Road Network

- The detailed internal road network design should encourage slow speeds to facilitate increased pedestrian and cycle activity.
- Any through traffic should be discouraged by traffic engineering measures to manage speed and volume, whilst providing unhindered through-access for buses and other service vehicles.
- Drop-off arrangements for schools and other community facilities remain unchanged under the proposed road layout.
- 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 open space, schools and other local activity nodes will outweigh any potential or perceived negative impacts resulting in the removal of cul-de-sacs.

Public Transport and Bus Services

- Bonnyrigg is located in close proximity to the Liverpool to Parramatta Transitway which provides Bonnyrigg with a good platform for increased public transport usage and increased public transport mode share.
- The Ministry of Transport is currently reviewing the existing bus routes in the area. For Bonnyrigg, the review is likely to result in the following arrangements:
 - Continuation of good levels of service on the Liverpool-Parramatta T-Way.
 - Increased service frequency on roads on the boundary of Bonnyrigg, including Cabramatta Road and Edensor Road connecting Bonnyrigg with Fairfield and Cabramatta.
- The Ministry of Transport's Integrated Network Planning process for Bus Contract 3 is nearing completion and it is likely that higher frequency routes would operate on primary roads such as Edensor Road and Elizabeth Drive / Cabramatta Road. Under this scenario, the majority of residents would continue to be within the 400 metre catchments of a bus stop.
- As part of the Masterplan design, the potential for a secondary bus route to operate through the estate along Tarlington Parade, Link Road, then on to Bunker Parade has been created. As such, the roads and intersections along this potential route will be designed with sufficient road width to accommodate easy passage by buses.

Pedestrian and Bicycle Accessibility

- The TMAP recommends a series of measures to improve pedestrian and cycle accessibility which have been incorporated into the Masterplan. These are summarised as follows:
 - Adopting pedestrian oriented design.
 - Provision of improved cycle and pedestrian access through the estate to activity centres.
 - Provision of good quality street furniture and other pedestrian design features including landscaping.

6.3.6 Infrastructure Issues

A broad range of issues regarding infrastructure delivery and maintenance were identified in the submissions and each of these has been addressed in the Submissions Response Table, which is attached as **Appendix 5**.

Hughes Trueman has updated the Water Cycle Management Report and the Infrastructure Report to address each of the relevant issues. These reports are attached as **Appendix 7** and **Appendix 10**.

The two major issues arising during the assessment of the application are addressed as follows:

Recycled Water

Both Sydney Water Corporation and Aqua Water have provided an assurance that recycled water will be provided to service the development.

Commercial negotiations are currently in progress for the proposed user of reticulated water mains to provide recycled water throughout the site. The Department of Planning are also proceeding with the necessary steps for recycled water to be provided as part of the BASIX tool.

Stormwater and Flooding

As previously stated, Flood Risk Maps and Overland Flow Risk Maps have been undertaken for Stage 1 and are included in the updated Water Cycle Management Report.

6.3.7 Environmental Issues

A broad range of environmental issues were identified in the submissions and each of these has been addressed in the Submissions Response Table, which is attached as **Appendix 5**.

The issues which were considered to be of significance and warranting a more detailed response are addressed as follows:

- BASIX Certificates and NatHERS Assessment have been prepared for the Stage 1 dwellings and are included at **Appendix 14**. The certificates demonstrate that the dwellings will meet and in some instances exceed the minimum requirements of BASIX (i.e. 40% reduction in water use, pass in thermal comfort and 40% reduction in energy use).
- While the proposed dwellings meet the minimum 40% requirement for reduced water consumption, the proposed incorporation of the recycled water reticulation scheme will improve the water score by around 25% depending on the dwelling.
- While the proposed dwellings exceed the minimum 40% requirement for reduced energy consumption, the proposed incorporation of solar hot water heaters in a significant proportion of the dwellings will improve their energy score by around 5-7%.

It is noted that with regard to the Deposited Plan and Strata Plan numbers and addresses for the proposed buildings, BASIX have advised that the reference "Stage1" can be used as the Plan number and number one ("1") as the street number. This will enable the certificates to be updated once the plan numbers and street numbers have been approved by Council. The BASIX certificates can then be updated at any stage prior to issue of the occupation certificate.

6.3.8 Economic Issues

The Economic Impact Assessment report prepared by MacroPlan that was lodged with the Part 3A application has been updated and the final version is attached at **Appendix 13**.

The principal amendments to the report include:

- The report now clearly states that the assessment seeks to examine the potential opportunities, rather than recommend an increase in retail floor space within the development area. Further, the report states that additional analysis would be required to confirm this opportunity (refer to Sections 1, 2.1, 6.1 and 10).

The Bonnyrigg Neighbourhood Centre (which includes the potential commercial facility) is not proposed until Stage 6 and further approvals will be required to facilitate the staged renewal of the estate.

As such, it is proposed that the additional analysis required to assess the economic impacts of any retail / commercial floor area located within the neighbourhood centre should be addressed within the application for Stage 6, taking into account the retail hierarchy and any other relevant economic issues at the time of preparation, lodgement and assessment of the application.

- The report now recognises the 2003 development consent issued with regard to a 16,000m² expansion of Bonnyrigg Plaza and the potential impact arising from the approved development proceeding (refer Section 7.1.1). It is noted that construction of this expansion is yet to commence and it is unclear at this stage if, or when, this consent will be acted upon.

As noted above, additional analysis will be required to confirm the identified potential opportunities for increased retail floor space at the relevant stage of development. The additional analysis would address the current or approved floor space within Bonnyrigg Plaza at that time and any other relevant changes within the retail catchment since the preparation of the original Economic Impact Assessment report.

Further to the above, the Community Renewal Services Strategy included at **Appendix 3** incorporates the other identified economic issues, including:

- Development of local employment and training opportunities.
- Development of local businesses and retained spending.

7 Modifications to Part 3A Application

7.1 Concept Plan

Specific changes to the documentation submitted with the Concept Plan in November 2007 include:

- Design guidelines and controls contained in Part Five of the Masterplan have been revised in relation to the following:
 - Lot size.
 - Site coverage (landscape area and building footprint).
 - Streetscape (in terms of garages).
 - Building height (to address third storey elements).
 - Private open space.
 - Fencing.
 - Storage.
 - Solar access.
- 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 the 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 as outlined in **Section 6.2.10** and **Section 6.3.6** of this PPR.
- The Transport Management Accessibility Plan has been updated to address details relating to car parking, mode shift, traffic impacts, internal road network, public transport and bus services and pedestrian and bicycle accessibility as outlined in **Section 6.2.7** and **Section 6.3.5** of this PPR.
- 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 as outlined in **Sections 6.2.10** and **Section 6.3.6** of this PPR.
- 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 approved expansion of the Bonnyrigg Plaza as outlined in **Section 6.3.8** of this PPR.

7.2 Voluntary Planning Agreement

The key changes to the draft Voluntary Planning Agreement include:

- Refinement of the items and information provided in the VPA.
- Preparation of an Infrastructure Delivery Plan (included at **Appendix 18**) 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.

7.3 Stage 1 Project Applications

Each of the amendments to the Bonnyrigg 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 Applications 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 made to optimise solar penetration into dwellings. These changes are provided in **Table 4**.

Table 4 – Plan Revisions for Solar Access

Super Lot Number	Previous Plans (Issue A)	Updated Plans (Issue B)
3	4 Plex - 4 x T7	4 Plex - 4 x T9
4	4 Plex - 4 x T14	3 Plex - T10, T13, T14
5	2 Plex - T5, T4	2 Plex - T5, T2
8	4 Plex - 3 x T9, T8	4 Plex - 2 x T6, T8, T9
9	3 Plex - 2 x T14, T3	3 Plex - T14, T13, T3
17	3 Plex - T2, T8, T9	3 Plex - Rotated
19	3 Plex - 2 x T7, T2	3 Plex - T2, T7, T8
20	3 Plex - 2 x T14, T4	3 Plex - Rotated
21	2 Plex - T1, T2	2 Plex - Rotated
22	3 Plex - 2 x T10, T4	3 Plex - 2 x T11, T4
23	Detached - T16	Detached - T18
24	Detached - T18	Detached - T16
25	2 Plex - T1, T2	2 Plex - Flipped
29	4 Plex - 2 x T7, T8, T9	4 Plex - 2 x T7, 2 x T6
30	2 Plex - 2 x T2	Detached - T17
31	4 Plex - 4 x T9	3 Plex - 2 x T14, T10
32	Detached - T19	2 Plex - 2 x T17
34	3 Plex - T2, T8, T9	3 Plex - Rotated
35	Detached - T18	Detached - T17
36	Detached - T17	Detached - T18
37	2 Plex - T1, T2	2 Plex - Flipped
39	4 Plex - 2 x T11, 2 x T10	4 Plex - 4 x T10
40	2 Plex - T1, T2	2 Plex - Flipped

Further to the above, the additional documentation associated with the Stage 1 Project Applications has been amended to reflect the revised proposal:

- The Subdivision Plan has been updated to reflect the revised housing layout.
- The landscape plans have been updated to reflect the revised housing layout and the amended provisions of the Bonnyrigg 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 as outlined in **Section 6.3.7** of this PPR.

- Indicative Materials and Finishes Report has been updated to reflect a minor change to the external colour schedule.
- The Crime Prevention Through Environmental Design report has been updated to assess the current Stage 1 architectural plans.
- The Stage 1 Infrastructure Report has been updated to address details relating to road widths, car parking provision, access places and turning circles.
- The Stage 1 Environment & Construction Management Plan has been updated to address provisions relating to water quality management.

8 Revised Statements of Commitments

8.1 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.

8.2 Stage 1 Project Application

8.2.1 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.

8.2.2 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.

9 Consent Authority Arrangements

The Bonnyrigg Living Communities Project proposes the renewal of the estate over 13 years, with 18 stages to facilitate construction of the dwellings, roads, public open spaces and associated infrastructure in a manner which minimises the impact on existing residents.

The Part 3A application seeks approval for a Concept Plan to guide the staged renewal of the estate and a Project Application for Stage 1 which seeks approval for the subdivision and construction of 106 dwellings, roads, public open space, stormwater infrastructure and associated works. The permissibility of the proposed development relies upon the provisions of Part 3A, having regard to the type of dwellings proposed and the required zone boundary adjustments, arising from the reconfiguration of open spaces and the realignment of Bunker Parade to run parallel to the public open space.

If the Minister determines under Section 75P(1) of the Act that future stages of the project will be assessed under the provisions of Part 4, then it is considered appropriate for the following to occur:

- Determination of any future development application should be generally consistent with the terms of approval of the Concept Plan and the associated Statement of Commitments.
- The future stages of the project are not to be considered as integrated development.
- The assessment of the future development applications is to be undertaken in accordance with the requirements determined by the Minister when approving the Concept Plan.
- The provisions of any environmental planning instruments that prohibit or restrict the carrying out of the project or stage of the project do not have effect if the Minister so directs.

It is noted that the Minister may declare by order that the declaration of the project under Part 4 may be revoked or amended.

10 Local Plan Amendments

10.1 Draft Local Environmental Plan

The proposed amendment to Fairfield Local Environmental Plan 1994 will not result in a fundamental change to the existing land use activities, being a residential estate with a series of public open spaces and stormwater infrastructure.

The amendment is not required to facilitate the approval or carrying out of the Concept Plan or the Stage 1 Project Application, however, the proposed amendment is considered to be important so future Section 149 certificates are clear and unambiguous with regard to the zoning and permissibility of the approved development.

Section 75R(3A) of the Act states:

- (3A) *The Minister may, by order published in the Gazette, amend an environmental planning instrument to authorise the carrying out of any of the following development (or to remove or modify any provisions of the instrument that purport to prohibit or restrict the carrying out of any of the following development):*
- (a) *development that is an approved project,*
 - (b) *development that is a project for which a concept plan has been approved (whether or not approval for carrying out the project or any part of the project is subject to this Part).*

It is the preferred option of the proponent that the LEP is amended under the provisions of Part 3A for a number of reasons, including:

- A comprehensive package of documentation has already being assessed in association with the Concept Plan and Stage 1 Project Application.
- The proposed amendment to the LEP is an administrative process to 'tidy up' the existing controls to facilitate the future assessment of later stages under the provisions of Part 4, including zone boundary adjustments and the introduction of additional housing types.
- It would avoid the need for a separate process under Part 3 with unnecessary administrative requirements that add little benefit to the understanding of the project or the assessment process.
- Fairfield City Council is fully supportive of the use of Part 3A to facilitate the amendment of the LEP. This matter was reported to Council on 11 September 2007 and Council resolved the following:
'That Council provide in principle support to the use of the rezoning procedures now available under part 3A of the Environmental Planning and Assessment Act 1979 in regard to future assessment of the State Significant Concept Plan for the Bonnyrigg Living Communities Project.'

The preferred option with regard to the format of the amendment to the LEP is to amend the existing site specific clause within the LEP regarding Bonnyrigg Town Centre (Clause 25H) to include appropriate objectives for the renewal of the residential estate, amend the hatching on the LEP map and amend the zone boundary interface. This would involve only a minor modification to the existing LEP.

It is considered appropriate that the Department of Planning and Fairfield City Council approach the LEP Review Panel to resolve the proposed method and format of the amendment to the LEP. This should occur at the earliest opportunity as the Concept Plan has been publicly exhibited and the issues associated with the Concept Plan are now well established.

A formal draft LEP amendment can be lodged with Fairfield City Council to formally commence the assessment process for the proposed amendment to the LEP upon resolution of the relevant process and the required format.

10.2 Draft Development Control Plan

Similar to the LEP, the proposed amendment of Bonnyrigg Town Centre – Development Control Plan No 28 is not required to facilitate approval of the Concept Plan or the Stage 1 Project Application. However, it is considered appropriate to update the existing local town planning controls so that the controls are consistent with the Concept Plan and Stage 1 Project Application.

A draft amendment to DCP 28 was lodged with the Concept Plan and Stage 1 Project Application, however, it is yet to be publicly exhibited. It is anticipated that amendments will be required to the DCP so that it is consistent with the revised Bonnyrigg Masterplan. Once the draft is satisfactory, it is expected that the revised draft Bonnyrigg Town Centre – Development Control Plan No 28 will be formally exhibited and assessed by Council.

