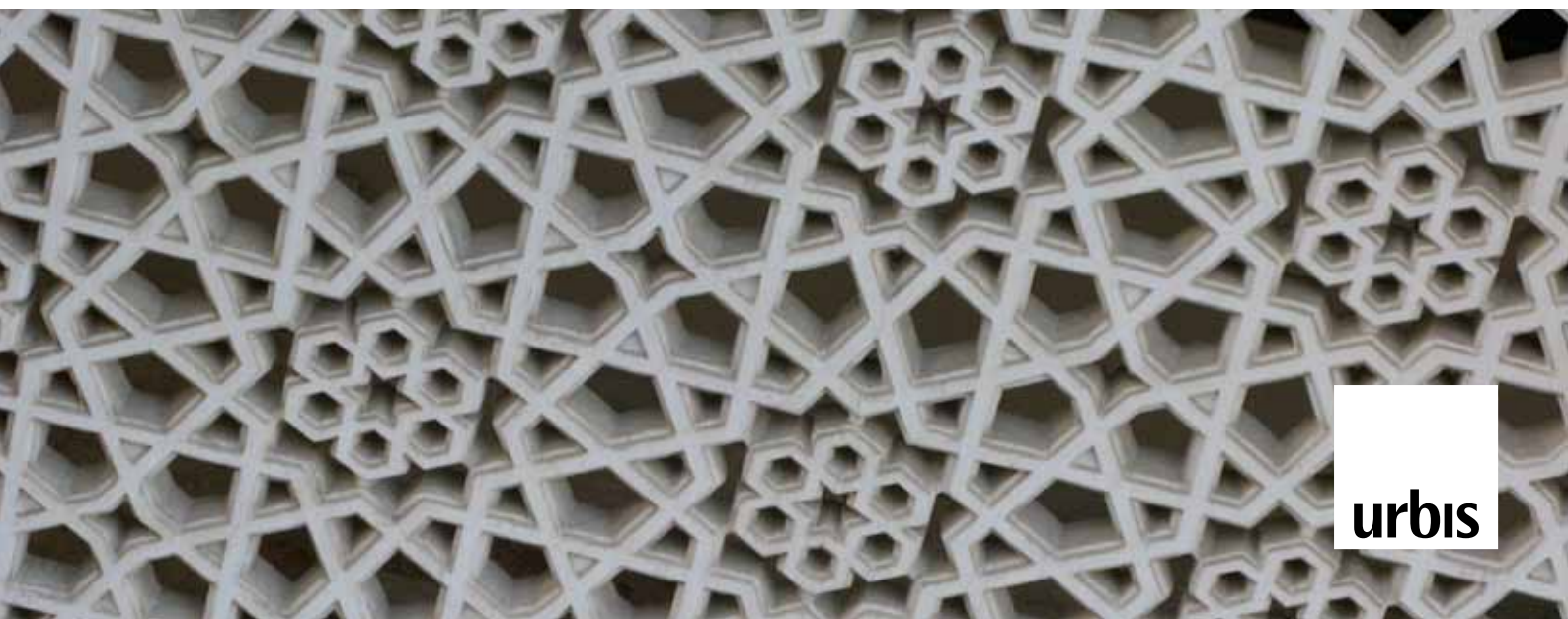


Riverwood North Estate Residential Renewal Project

PREFERRED PROJECT REPORT

Prepared for Housing NSW

February 2011



urbis

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1 Introduction

This Preferred Project Report (PPR) has been prepared on behalf of Housing NSW and in association with the renewal of the existing social housing dwellings at Riverwood through a Public Private Partnership between Housing NSW and Payce Communities Pty Limited.

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 project, including the key steps associated with the preparation, lodgement and assessment of the Concept Plan application. It outlines the proponent's response to the issues raised by the stakeholders and the modifications to the original application documentation. A revised Statements of Commitments is also included. The relevant sections are listed below:

- Section 2 – Overview of Project.
- Section 3 – Identification of Key Issues and Responses.
- Section 4 – Modifications to the Part 3A Application.
- Section 5 – Revised Statements of Commitments.
- Section 6 – Summary and Conclusion.

The PPR is supplemented by the following documents:

- Updated Concept Plan Submission (architectural documentation) prepared by Turner + Associates of various revision dates.
- Updated Concept Plan Application Design Report - Civil, Drainage, Water and Sewerage Infrastructure, prepared by Warren Smith & Partners and dated 4 February 2011.
- Updated Landscape Proposal - Concept Report prepared by Turf Design Studio and dated 3 February 2011.

2 Project Overview

The Director-General of the Department of Planning issued correspondence on 17 October 2010 declaring the Riverwood North Housing Renewal Project to be a Project to which Part 3A of the Major Project SEPP (now known as the Major Development SEPP) applies. The Director-General also authorised the submission of a Concept Plan for the project. The Director-General's Environmental Assessment Requirements (DGRs) for the Concept Plan Application and a Stage 1 Project Application were subsequently issued by the Department of Planning on 4 November 2010.

The Environmental Assessment (EA) was prepared in accordance with Part 3A of the Act and the provisions of the DGRs. The EA was initially lodged for a 'test of adequacy' on 12 November 2010, with multiple copies being submitted on 24 November 2010 to facilitate public exhibition.

The EA was publicly exhibited at the Department of Planning and Canterbury City Council from 1 December 2010 to 4 January 2011. Advertisements were placed in metropolitan and local newspapers and individual letters were sent to nearby land owners and residents advising the relevant details of the public exhibition of the EA. No individual/resident submissions were received as a result of the public exhibition.

Key stakeholders were also consulted by the Department of Planning during the public exhibition period. Written submissions were received from the following authorities:

- Canterbury City Council
- Riverwood Community Centre Inc
- Roads and Traffic Authority NSW
- Transport NSW
- Sydney Water

The public and stakeholder submissions were made available to the proponent for review following the closure of the public exhibition. The stakeholder submissions and the proponent's responses to those issues are outlined in the following section of this report.

3 Identification of Key Issues and Responses

3.1 Overview

This section of the report outlines the responses to the key issues raised by the Department of Planning and the additional issues raised in the stakeholder submissions received during and following the public exhibition of the Concept Plan Application, including:

- Canterbury City Council
- Riverwood Community Centre Inc
- Roads and Traffic Authority NSW
- Transport NSW
- Sydney Water

The proposed modifications to the development are outlined in **Section 4** and a revised Statement of Commitments is provided in **Section 5**.

3.2 Department of Planning

The Department of Planning issued emailed correspondence on 1 February 2011 which stated:

'...following the Department's preliminary assessment of the Environmental Assessment, we have no additional issues to raise but note Council's issues regarding s94 contributions/VPA, setbacks/separations, stormwater/drainage and consider it would be appropriate to further consult with Council regarding their comments as these issues will require further Council involvement. I understand that you have undertaken this consultation and you have reached an agreement regarding the majority of the issues and are continuing to resolve the outstanding issues regarding stormwater/drainage.

The Department trusts that the resolutions would be documented in the Proponent's response to submissions/preferred project report. We look forward to receipt of this information'.

The Council submission is addressed in full in **Section 3.3** of this report. The three key issues identified in the above response are addressed in detail in the following sections.

3.2.1 Section 94 Contributions/VPA

The Department of Planning verbally advised that greater certainty was required with regard to the proposed approach to infrastructure funding. In particular, it was advised that the Draft Statement of Commitment needed to be amended to confirm whether it is proposed to make payment of Section 94 contributions or enter into a Voluntary Planning Agreement with Canterbury City Council.

Housing NSW and Payce have engaged in further discussions with Canterbury City Council since the lodgement of the Concept Plan application. It was verbally agreed at a meeting held at Council's offices on 27 January 2011 that a Voluntary Planning Agreement can be entered into between the parties to deliver physical infrastructure works and community capacity building activities in a staged manner.

It is envisaged that discussions between the parties will be ongoing to facilitate the best outcome for the site and the community, having regard to the impacts of the proposal on the existing physical and social infrastructure. Accordingly, the revised Draft Statement of Commitment proposes that the VPA be executed prior to the release of the first Construction Certificate for dwelling construction.

3.2.2 Setbacks/Separations

Unlike the construction of a single residential flat building between two existing buildings and within an established streetscape, the proposed renewal creates the opportunity to develop a new suite of controls that will achieve a high level of amenity for future residents, while balancing its potential impacts on the surrounding local community.

The Concept Plan application enables the development of indicative site layout plans which can be further refined at the detailed design stage for the future Project/Development Applications to ensure that they meet the provisions of the relevant controls. The proposed siting and layout of the future residential buildings as shown in the indicative plans has given detailed consideration to a range of matters, including:

- A comprehensive analysis of the site opportunities and constraints, including lot dimensions, topography, vegetation, existing buildings, local road network, public open space connections and the like.
- Statutory planning controls including State Environmental Planning Policy No 65 – Design Quality of Residential Flat Buildings (including the Residential Flat Design Code), Canterbury Planning Scheme Ordinance and relevant development control plans.
- Strategic planning policies, including NSW State Plan, Metropolitan Plan for Sydney 2036 and the Draft Subregional Strategy for the South Subregion.

The indicative built form has been ‘tested’ through the detailed design work undertaken in the preparation of the Stage 1 Project Application. The proposed buildings have been refined to better respond to the site and the matters listed in SEPP 65. It is anticipated that the future detailed design stages will result in a similar refinement of the indicative built form.

The particular issues raised by Council with regard to the compliance of the proposal with SEPP 65 - street setbacks and separation - are addressed in detail below, having particular regard to the refinements made in Stage 1 and the opportunities to provide greater certainty for the future stages of the planned renewal.

Requirement	Response
Street Setbacks	
Objectives	
<i>To establish the desired spatial proportions of the street and define the street edge</i>	<p>The proposed front setbacks vary significantly across the site, responding to both the existing local context (ie existing buildings, road network, public open spaces, etc) and the future context (ie new access roads, green square, public open spaces, etc).</p> <p>Buildings A, B and C in Stage 1 include significant variation in the front setbacks as described below:</p> <ul style="list-style-type: none"> ▪ Building A: this building is setback approximately 3 metres to Washington Avenue, taking into account its southern frontage, relatively narrow building floorplate, width of Washington Avenue and the setback of the existing buildings to the south. A 1.5 metre setback is proposed to the new access road, having regard to the minor nature of this road as a through-site connection, rather than a major thoroughfare. The setback to Kentucky Road varies between 3.9 and 4.7 metres, providing for optimal solar access to internal and external living areas along this northern frontage and large landscaped areas to provide for shading during summer. ▪ Building B: the setback to the south along Washington Avenue is approximately 3 metres, which is considered appropriate for identical reasons as listed for Building A. The eastern setback to Kentucky Road varies from 1 metre adjacent to the garden square which is a low speed shared traffic/pedestrian zone to 8 metres in the south, adjacent to the intersection of Kentucky Road with Washington Avenue. The northern setback is staggered, responding to the curvature of the road, with

Requirement	Response
	<p>excellent amenity arising from its northern orientation and outlook over the garden square.</p> <ul style="list-style-type: none"> ▪ Building C: this building has direct frontage to the garden square, resulting in a varied setback from Kentucky Road. The southern corner is setback 0.5 metres from the road reserve, providing good accessibility for people with disabilities via a ramp linking to the pedestrian footpath. The northern corner of the building is setback 27.9 metres from the road reserve and benefits from direct access and frontage to the garden square. <p>Overall, the siting and design of the proposed buildings in Stage 1, including the north-south orientation, narrow floorplate and setbacks, are designed to provide visual connections from Washington Avenue to the green square, public open space and Salt Pan Creek Reserve. An important part of the urban design considerations for the precinct involved establishing a visual and physical permeability to Salt Pan Creek which is not extant in the existing development.</p> <p>While the buildings in the future stages have not been subject to detailed design at this stage, it is anticipated that a similar approach will be adopted. Other issues to consider will be the orientation of buildings to achieve optimal solar access, while providing a high level of passive surveillance of the existing and proposed local road network and the open space connections, including the north-south connecting park to Salt Pan Creek Reserve and the east-west connection to the Riverwood Community Centre.</p> <p>It is acknowledged that particular consideration needs to be given to the proposed building to the west along Washington Avenue, which currently presents as a large building mass. While the detailed design work for Stage 2 is yet to be undertaken, it is generally agreed that it may be appropriate to provide an increased setback of 5 metres along Washington Avenue to allow for additional landscaping including tree planting and private gardens. The additional landscaping will assist in softening the visual appearance of this building and provide for enhanced visual privacy for these dwellings, particularly to the habitable rooms of apartments on the lower floors.</p>
<i>To create a clear threshold by providing a transition between public and private space</i>	The proposed front setbacks have been designed to allow for the location of generous communal open spaces for residents either behind or between buildings to avoid ambiguity about the ownership and function of the open spaces. Private open spaces at ground level and facing the street include balconies or fenced courtyards, providing for a clear definition between public and private space.
<i>To assist in achieving visual privacy to apartments from the street</i>	The sloping topography of the site enables many of the ground floor apartments to be positioned between 0.5 and 1.5 metres above ground level, enhancing privacy of dwellings from the street. Where ground floor dwellings are closer to street level, areas that require a higher level of visual privacy, such as bedrooms, can incorporate louvres and/or screen planting, as considered appropriate. These provisions will be explored in detail during the design development of each building.
<i>To create good quality entry spaces to lobbies, foyers or individual dwelling entrances</i>	Lobbies and foyers to individual buildings will be provided both from the street and from the communal open space. For example, Buildings A and B in Stage 1 have been designed to allow for large through lobbies, providing both natural light and good passive surveillance. The entrances to individual buildings are clearly legible and visible from the existing and proposed local road network and provide for appropriate access, taking into account the needs of the future occupants of the building (ie seniors). The entrance to Building C is located above the existing ground level and accessed via an accessible pathway to the south or the stairs to the north. Glazed ceramic tile features provide strong identification of the building entrances from the street.
<i>To allow an outlook to and surveillance of the street</i>	Internal and external living areas will be oriented to the street, providing for good passive surveillance of the public domain, including the existing and proposed local road network, garden square and other public open spaces.

Requirement	Response
	The detailed design undertaken in the preparation of the Stage 1 Project Application has demonstrated
<i>To allow for street landscape character</i>	The varied setbacks provide visual interest and variety in the landscape experience, allowing for trees and garden areas along a significant portion of the development frontage.
Designing the controls	
<p><i>Use different setback controls to differentiate between urban and suburban character areas. Setbacks typically vary from none in city centres to 10 metres on suburban streets</i></p> <ul style="list-style-type: none"> ▪ <i>establish a dimension to match existing development or step back from special buildings or to retain significant trees</i> ▪ <i>use a 'build to' line in urban areas where a consistent street edge needs to be reinforced. A 'build to' line includes the articulation zone - use a range where the desired character is for variation within overall consistency; a 5 to 9 metre range is typical of suburban areas</i> 	<p>The Residential Flat Design Code applies different controls to 'urban' and 'suburban character areas', however, there is no clarity or definition provided with regard to the use of these terms. It does not appear that these terms are based on geography or distance from the Sydney CBD but rather the local context in which the site is located.</p> <p>It could be argued that the proposed renewal of Riverwood North will result in this precinct changing from a more traditional 'suburban character area' to a more 'urban character area' location as a result of both the proposed increase in residential density (number of dwellings) and the proposed increase in amenity (public domain improvements). Accordingly, an appropriate setback needs to be established for the renewal area, taking into account the visual and amenity impacts on the site and surrounding locality, rather than simply adopting the '5 to 9 metre range' listed in SEPP 65 for suburban areas.</p> <p>The Stage 1 buildings include a range of setbacks that respond to the existing and proposed road network. The 'major' roads include a predominant 3 metre setback along Washington Avenue and a more varied setback along Kentucky Road, generally ranging from 4-8 metres (excluding point encroachments). The proposed setbacks take into account the site context, including the proximity to garden square and the shared zone, as well as the internal layout of individual apartments, with orientation of habitable rooms. Large areas of landscaping, including street trees and private/communal gardens, are provided to facilitate visual privacy for residents on the lower floors. The new 'minor' roads include lesser setbacks of approximately 1.5 metres, recognising the low intensity use of these streets. Planting zones and wide footpaths will provide good amenity for pedestrians and residents along these secondary streets. Many of the ground level apartments have additional frontage to the internal courtyard.</p>
<i>Nominate an appropriate percentage of future development to be built to the 'build to' line, where one is set. A 'build to' line does not necessarily imply an unrelieved and unmodulated frontage along the whole length of the building</i>	<p>A 'build to' line is not proposed within the Concept Plan. Rather, the documentation produced by Turner + Associates provides an indicative layout of the proposed staged development, with the detailed provisions to be further developed in the future Project/Development Applications.</p> <p>The architectural drawings for Stage 1 have been substantially developed and have been provided for information purposes. It can be seen that while the proposed are generally aligned to the street, there is significant articulation arising from the location of the balconies on each of the building elevations. Buildings A and B are narrow in width along the northern and southern elevations, reducing their potential impact. The setback to the eastern elevation is staggered, with an internal courtyard in the centre of the building and a varied setback to the north that responds to the curvature of the road. While the western elevation of Building A has limited visibility due to its location on the new north-south connection, this longer elevation is broken down into two separate building masses, with a visual break between the upper levels. Building C is setback from the street at an angle, providing a varied front setback which is again, articulated through the location of balconies along this frontage.</p>
<i>Minimise overshadowing of the street and/or other buildings</i>	<p>The indicative shadow diagrams submitted with the Concept Plan application demonstrated that the proposed street setbacks will facilitate an acceptable impact with regard to solar access and shadowing.</p> <p>Additional details regarding overshadowing will be provided in the detailed designs of the future stages in the Project/Development Applications.</p>
<i>In conjunction with height controls, consider secondary upper level</i>	The buildings shown in the concept plan are typically 4-6 storeys high with localised zones providing an additional 2-3 storeys. The design concept

Requirement	Response
<i>setbacks to reinforce the desired scale of the buildings on the street</i>	<p>positions these higher forms on the southern side of building to reduce overshadowing and denote key points of the precinct, ie entry and park edge. The setback of these higher zones is shown the same as the lower levels.</p> <p>The relationship between the upper and level parts of the buildings will be examined in detail during the detailed design phase, providing a holistic response to the apartment planning, including the elevational design strategy and relationships with other buildings. The setbacks shown will provide appropriate emphasis of form in the precinct, provide sufficient density, appropriate solar access and allow a architectural expression sensitive to the needs of residents and the adjoining community to emerge during the design development stage.</p>
<p><i>In general, no part of a building or above ground structure may encroach into a setback zone. Exceptions are:</i></p> <ul style="list-style-type: none"> ▪ <i>underground parking structures no more than 1.2 metres above ground, where this is consistent with the desired streetscape (see Ground Floor Apartments)</i> ▪ <i>awnings</i> ▪ <i>balconies and bay windows</i> 	<p>The Concept Plan does not seek to set a specific front setback control but provides an indicative layout for the future residential buildings which will be subject to further detailed design.</p> <p>It is noted that the front setback measurements shown on the Stage 1 architectural drawings do not include the balconies. If the balconies are included within the measurement of the front setback, then the actual building setback is heavily articulated and may be up to 2 metres greater than shown on the drawings.</p>
Control Checklist	
<i>Identify the desired streetscape character, the common setback of buildings in the street, the accommodation of street tree planting and the height of buildings and daylight access controls</i>	<p>As previously discussed, the Concept Plan distinguishes between the 'major' roads, Washington Avenue and Kentucky Road, and the 'minor' or secondary access roads that are to be provided between these two roads. The larger setbacks on the major roads allow for large street trees and landscape zones in front of the buildings. The garden square and green street treatment on Kentucky Road will also provide extensive landscaping and multiple tree planting zones for street trees. The 'minor' roads are less active, however, still make provision for street tree planting and courtyard plantings.</p> <p>The Concept Plan also includes building height controls of between 4 and 9 stories, which are generally lower to the north and higher to the south. The proposed setbacks are mindful of the proposed building heights and the potential impact on the streetscape.</p> <p>Daylight access was modelled for the entire site to confirm that the development responds appropriately to the Residential Flat Design Code recommendations for solar access, taking into account the indicative building setbacks and separation distances.</p>
<i>Relate setbacks to the area's street hierarchy</i>	<p>Washington Avenue is the key entry point to the northern part of Riverwood. Appropriate setbacks have been provided along this frontage to achieve good landscaping, including new street trees. The massing of the buildings has also been designed in consideration of the existing built form on the opposite side of the street. Kentucky Road will become more prominent as the site is renewed. New development will be orientated to interact with this street, including the proposed garden square.</p> <p>The new streets that connect Washington Avenue and Kentucky Road are of a more secondary nature and hence have a reduced street width. The proposed setbacks of these streets is generally less than what is proposed along the more major streets and are designed to enable suitable levels of amenity to apartments, taking into account the resultant building separation, solar access, visual privacy and the like.</p>
<i>Identify the quality, type and use of gardens and landscaped areas facing the street</i>	<p>The development will provide a variety of both indigenous and cultural plantings. Evergreen native trees will provide shade, shelter, and habitat. Exotic deciduous species will provide seasonal variation and solar access in the cooler months. Species used along street frontages will be low maintenance, drought tolerant species to ensure the visual amenity of</p>

Requirement	Response
	planting can be sustained with minimal inputs required from maintenance staff and residents. New trees will provide shade to pedestrians and the road surface, enabling a reduction in the heat island effect.
<i>Test street setbacks with building envelopes and street sections</i>	Numerous building forms and organising principles were considered in plan, section and by 3D massing models during the development of the indicative plans provided with the Concept Plan. The street sections show that appropriate landscaping zones are provided allowing good pedestrian amenity, appropriate privacy to residents and daylight access.
<i>Test controls for their impact on the scale, proportion and shape of building facades</i>	The street elevations were modelled for each of the proposed building forms and are presented in the Concept Plan. The shape and proportion of the elevations allows an appropriate basis for the development of the building facades in subsequent stages where the architectural character can be defined with due regard to apartment layout, dialogue between adjoining forms, and the architectural design programme.
Building Separation	
Objectives	
<i>To ensure that new development is scaled to support the desired area character with appropriate massing and spaces between buildings</i>	<p>The proposed buildings are sited to achieve adequate separate between the buildings. The street setbacks as discussed above have been designed to enable large landscaped spaces to be provided between the buildings, having regard to their overall height, bulk and scale.</p> <p>For example, the Stage 1 development will include a large area of communal open space between Buildings A and B, while Building C is setback behind a large public open space referred to as 'garden square'. The future stages will adopt a similar approach, with front setbacks oriented to the street and/or public open spaces and large landscaped communal open spaces provided either between or behind individual buildings.</p>
<i>To provide visual and acoustic privacy for existing and new residents</i>	<p>The proposed siting and design of the buildings as described above will provide for satisfactory visual and acoustic privacy between the proposed buildings.</p> <p>For example in Stage 1, Buildings A and B have a distance separation of 24.3 metres, providing ample area for landscaping between the buildings to provide for visual privacy and sufficient separation to provide for acoustic privacy. Building C is well setback from the street and is a significant distance from Buildings A and B. The future stages will also provide for sufficient separation from the existing and proposed buildings, which will be detailed during the design phase for these Project/Development Applications.</p>
<i>To control overshadowing of adjacent properties and private or shared open space</i>	<p>The indicative shadow diagrams submitted with the Concept Plan application demonstrated that the proposed street setbacks will facilitate an acceptable impact with regard to solar access and shadowing.</p> <p>Additional details regarding overshadowing will be provided in the detailed designs of the future stages in the Project/Development Applications.</p>
<i>To allow for the provision of open space with appropriate size and proportion for recreational activities for building occupants</i>	As noted above, the buildings have been sited to provide large landscaped communal open spaces for the benefit of residents and their guests. These spaces are in addition to the public open spaces which can be enjoyed by both residents of the site and the broader local community.
<i>To provide deep soil zones for stormwater management and tree planting, where contextual and site conditions allow</i>	Turner + Associates has confirmed that the layout of the proposed buildings will facilitate compliance with the requirements for deep soil zones and open space, providing ample opportunity for landscaping and tree planting. Further, the large areas of public open space that are being created enable water sensitive urban design features to be accommodated, providing for both stormwater management and landscape features.
Designing the controls	
<i>For buildings over three storeys, it is recommended that building separation increase in proportion to building height to ensure</i>	Turner + Associates has confirmed that the Concept Plan will facilitate general compliance with the standard building separation requirements of SEPP 65. Where individual dwellings are located within the recommended separation distances, the objectives of the control will be achieved through

Requirement	Response
<p><i>appropriate urban form, adequate amenity and privacy for building occupants. Suggested dimensions within a development, for internal courtyards and between adjoining sites are:</i></p> <ul style="list-style-type: none"> - up to four storeys/12 metres ▪ 12 metres between habitable rooms/balconies ▪ 9 metres between habitable/balconies and non-habitable rooms ▪ 6 metres between non-habitable rooms - five to eight storeys/up to 25 metres ▪ 18 metres between habitable rooms/balconies ▪ 13 metres between habitable rooms/balconies and non-habitable rooms ▪ 9 metres between non-habitable rooms - nine storeys and above/ over 25 metres ▪ 24 metres between habitable rooms/balconies ▪ 18 metres between habitable rooms/balconies and non-habitable rooms ▪ 12 metres between non-habitable rooms 	<p>the appropriate internal arrangement of rooms (eg habitable–non-habitable, non-habitable–non-habitable).</p> <p>In Stage 1, Buildings A and B have a distance separation of 24.3 metres, complying with the provisions of the SEPP. Building C is significantly separated from Buildings A and B by Kentucky Road and garden square, providing a large separation between the buildings.</p> <p>Building separation will be considered in detail during the subsequent design development of each future building when the actual arrangement of internal spaces and their relationship to other viewpoints can be determined and considered.</p>
<p><i>Allow zero building separation in appropriate contexts, such as in urban areas between street wall building types (party walls)</i></p>	<p>Not applicable – zero lot lines are not proposed to adjoining buildings or lot boundaries.</p>
<p><i>Where a building step back creates a terrace, the building separation distance for the floor below applies</i></p>	<p>Building step backs occur longitudinally to the building form and do not affect the building separation criteria as recommended by the Residential Flat Design Code.</p>
<p><i>Coordinate building separation controls with side and rear setback controls. For example in a suburban area where a strong rhythm has been established between buildings, smaller building separations may be appropriate</i></p>	<p>Not applicable – the buildings face multiple street frontages and do not have distinct side or rear setbacks. Non-street frontages are generally to open space rather than existing built up areas.</p>
<p><i>Coordinate building separation controls with controls for daylight access, visual privacy, and acoustic privacy</i></p>	<p>The Concept Plan generally meets the recommended building separation criteria of the Residential Flat Design Code. The indicative plans provided with the Concept Plan were modelled in three dimensions to determine effects of the massing on the solar access and amenity of the residents. The massing allows the Concept Plan to respond appropriately to the recommendations for solar access.</p> <p>The 3D model allowed a preliminary assessment of visual and acoustic privacy which will be further developed in the design development stages. Room placement and elevational strategies including privacy screens and louvres will allow appropriate amenity for residents.</p>
<p><i>Protect the privacy of neighbours</i></p>	<p>Where internal courtyards are provided to each stage of the Concept Plan</p>

Requirement	Response
<i>who share a building entry and whose apartments face each other by designing internal courtyards with greater building separation</i>	with dimensions greater than the RFDC building separation requirements. The internal courtyards are design to allow generous terraces to the ground floor apartments as well as communal landscaped spaces for the use of the residents which also provide pleasant outlooks for the apartments which look into the courtyards.
Control Checklist	
<i>Design and test building separation controls in plan and section</i>	The Concept Plan was modelled in plan, section and by massing model to explore the interrelationships of the buildings and open spaces.
<i>Test building separation controls for daylight access to buildings and open spaces</i>	The buildings of the Concept Plan were modelled in 3D using a preliminary floor plan of each apartment. This allowed an assessment of the solar access to each apartment in the development. The results of this analysis indicated that the Concept Plan provided an appropriate response to the Code recommendations.
<i>Building separation controls may be varied in response to site and context constraints</i>	Where building separation controls vary from the minimum recommendations, allowance has been made for apartments to be orientated in different directions to allow non-habitable-habitable or non-habitable – non-habitable relationships.
<i>Developments that propose less than the recommended distances apart must demonstrate that daylight access, urban form and visual and acoustic privacy has been satisfactorily achieved</i>	Most of the apartments in the Concept Plan are located so that the building separation distances exceed the Code requirements. In the small number of apartments where these requirements may not be achieved, louvres and other screening devices will be provided at the detailed design phase. The sketch views presented in the Concept Plan show that these devices could contribute effectively as components in the architectural language of the proposal and as elements to provide privacy for residents.

3.2.3 Stormwater/Drainage

Canterbury City Council raised a number of specific issues with regard to stormwater and drainage design which have been the subject of further discussion between the proponent and Council. A meeting was held at Council's offices on 25 January 2011 to discuss the issues raised and the suggested responses by the proponent.

It was generally agreed that a number of the matters raised relate to detailed design matters that will be addressed in the Project/Development Application stage. However, it was also agreed to make a number of modifications to the Concept Plan drawings to ensure that the future detailed design phase will appropriately respond to Council's requirements. Each of the proposed modifications to the stormwater/drainage documentation is listed in **Section 4** of this report.

3.3 Canterbury City Council

The issues raised by Council in their written submission dated 4 January 2011 are listed in the following table, accompanied by the proponent responses to each of those issues.

The table references where the response includes a modification to the original Concept Plan documentation (as outlined further in **Section 4**) and/or a modification of the original Draft Statement of Commitments (as listed in **Section 5**).

Issue	Response
General Statutory Planning Considerations	
Zoning/Permissibility The subject site is zoned Part Residential 2(c4) and Part Open Space Existing Recreation 6(a) under the Canterbury Planning Scheme Ordinance (CPSO). The proposal is defined under the CPSO as 'multiple unit housing' which is a permissible use of the land with development consent.	Noted
Integrated Development The subject site is also located in proximity of a natural watercourse. As a result, the proposal is likely to require separate approval from the NSW Office of Water for a 'controlled activity' under the relevant sections of the Water Management Act 2000. You are therefore advised to liaise directly with representatives of the NSW Office of Water regarding their General Terms of Approval.	Section 75U provides that certain authorisations are not required for a Concept Plan (or Project) Application, including an activity approval under Section 91 of the Water Management Act 2000. However, it is understood that the Department of Planning has referred the application to the NSW Office of Water for comment.
State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Buildings The Environmental Assessment report states that the proposal will comply with the requirements of State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Buildings (SEPP65), although the report also recognises a noncompliance with the street setback and building separation controls of the SEPP. Appendix H of the report also notes in many instances that further details will need to be forwarded to confirm compliance with these controls. Council is not convinced that the proposed reduced front setbacks to between 1 and 3 metres is appropriate for a suburban precinct and would not meet the objectives of the SEPP. The proposed front setbacks provide little opportunity for the provision of landscaping and areas of deep soil planting for enhanced privacy and streetscape quality. As noted in our letter dated 4 November 2010 where we reviewed the draft Director-General's requirements for the project, we had some concern about overshadowing of private and communal open space areas and privacy relationships within the development. We remain concerned about these issues based on the level of information provided to date, particularly having regard to the reduced separation between buildings (in some instances) and the resulting relationship between windows and areas of private open space and likely amenity for future occupants of the development.	The Environmental Assessment report submitted with the Concept Plan application acknowledges that SEPP 65 applies to the proposal, however, it also notes that it is not yet possible to confirm full compliance, stating: <i>This documentation package includes illustrative layouts of the apartments that could be accommodated within the proposed indicative development concept. While this documentation is only illustrative, it has been provided to enable a preliminary assessment of the proposed built form in accordance with the SEPP 65 design principles</i> A comprehensive analysis of the proposed front setbacks and building separations has been provided in Section 3.2.2 of the Preferred Project Report, having regard to the other provisions of SEPP 65 as cited in Council's correspondence. Overall, it is considered that the proposal satisfactorily addresses the provisions of SEPP 65 and will provide a positive outcome for future residents and will not have any unreasonable impacts on the surrounding area.

Issue	Response
<p>Canterbury Development Control Plan No. 13 – Multiple Unit Development Code</p> <p>As noted in the Environmental Assessment report, the proposed development will result in a number of non-compliances with the requirements of our Development Control Plan No. 13 – Multiple Unit Development Code, including density, landscaped open space, front setbacks and building height. The report concludes that many of these non-compliances are ‘fully justified and considered appropriate’. While we would anticipate that having regard to the many positive attributes of the proposed development that strict compliance with the requirements of DCP 13 would be unreasonable, we remained concerned that the general level of amenity to be provided to future occupants of the development may be compromised particularly having regard to the extent of a number of these non-compliances.</p>	<p>The proposed non-compliances with DCP 13 pertain to matters which the development is fully compliant with in the context of SEPP 65, with the exception of front setbacks.</p> <p>A detailed justification for the front setbacks is provided in Section 3.2.2 and is considered to provide an appropriate response to this issue.</p> <p>Overall, the proposed variations are considered to be entirely justified as they will enable dwellings to be delivered at an affordable price, in line with the objectives of the proposed renewal.</p>
<p>Canterbury Development Control Plan No. 20 – Car Parking</p> <p>The Environmental Assessment report recognises that the proposed car parking provision will not meet the minimum requirements of Council's Development Control Plan No. 20. The rate of parking provided for the private component of the development is less than what is required by Council's DCP, however is expected to satisfactorily cater for the development. With respect to the social housing component, while recognising that there will be reduced vehicle ownership for social housing, the proposed parking rate of one space per 10 dwellings is considered inadequate and should be reconsidered. A rate of one space per 5 dwellings is contained within State Environmental Planning Policy (Housing for Seniors and People with a Disability) and it is considered that this figure would be a more comparable figure to ensure that adequate parking is provided on site for this component of the development without excessive demand for on-street parking within the precinct.</p>	<p>Varga Traffic Planning Pty Ltd has reviewed Council's submission and provided the following response:</p> <p><i>The provision of 1 space per 10 dwellings under the buildings is supplemented by a further 12 parking spaces that are to be provided on the new link road that is to be located immediately adjacent to Building A, plus a further 15 on-street parking spaces which are located in the section of Kentucky Rd that traverses the Social Housing development, the immediate vicinity of the site. There will be a total of 42 on and off street parking spaces available to residents of the Social Housing development, equivalent to approx one space per 3.5 dwellings.</i></p> <p>Further to the above, it is noted that the Seniors SEPP is based on private housing, which have a higher demand for car parking. Housing NSW has advised that there is a much lower demand for car parking within a social housing development for seniors.</p>
<p>Canterbury Section 94 Contributions Plan 2005</p> <p>The redevelopment of the site will require the payment of appropriate monetary contributions in accordance with the requirements of Council's Section 94 Contributions Plan 2005. It is acknowledged that negotiations are continuing with Council regarding the opportunity to relocate the existing Riverwood Library to a site immediately adjacent to this development site, which may also include the incorporation of other facilities for the benefit of the wider community.</p> <p>Such an arrangement will require the proponent and Council to enter into a Voluntary Planning Agreement (VPA). It is acknowledged in the documentation supplied that a Section 94 Contribution in accordance with the requirements of Council's Section 94 Contributions Plan 2005 will be made or alternatively, an equivalent or greater figure under a VPA will be provided. This issue is on-going and will require further discussions between the relevant stakeholders.</p>	<p>Payce and Canterbury City Council have had ongoing discussions regarding entering into a Voluntary Planning Agreement (VPA).</p> <p>A verbal commitment has been given by both parties to agree to participate in further discussions to enable the proponent to amend the Draft Statement of Commitments to provide greater certainty regarding the funding of infrastructure by way of the VPA rather than through payment of Section 94 contributions.</p> <p>The revised Statement of Commitments provided in Section 5 of this PPR includes a modified commitment that excludes any reference to Section 94 contributions and commits to entering into a VPA.</p>

Issue	Response
<p>Land Swap with Council</p> <p>As part of the planning and design of this proposal, Housing NSW seeks to facilitate the integration of the development site with surrounding areas to improve connectivity of areas of Riverwood to the south of the site through to the Salt Pan Creek Reserve. In this regard, Housing NSW have approached Canterbury City Council to swap land that they own adjacent to Salt Pan Creek Reserve for land owned by Council located between Washington Avenue and Kentucky Road. Council has agreed in principle to the proposed land swap as set out in a letter to Housing NSW dated 13 December 2010. We have not yet received any further advice from Housing NSW on this matter. This issue is on-going and will require further discussions between the relevant stakeholders.</p>	<p>Noted and agreed</p>
<p>Disability Access</p> <p>Our Disability Access Committee has reviewed the documentation provided and has recommended that a number of conditions be imposed as part of any development consent issued to improve disability access. These conditions are provided in the attached list of recommended conditions.</p>	<p>The recommended conditions have been reviewed and the conditions that are appropriate to incorporate at the Concept Plan application stage have been included within the revised Statement of Commitments in Section 5. The only change is with regard to the proposal for all of the social housing dwellings to be capable of being adapted to accommodate wheelchair access. This is not consistent with Housing NSW requirements and as such, has been modified to provide for “universal access” (to Housing NSW standards) to all universal units.</p> <p>The Project/Development Applications for the future stages will provide greater design detail to enable a more thorough assessment of the access provisions.</p>
<p>Safety and Security</p> <p>Our Community Safety Officer has assessed the documentation provided and made specific recommendations to improve access control, territorial reinforcement and natural surveillance of the development. These conditions are provided in the attached list of recommended conditions.</p> <p>The scale of the development does however raise some concerns about the adequacy of lighting, sight lines and other security measures in and around the development and car parks. In this regard, further consideration needs to be given to specific environmental design measures to enhance the security and personal safety of residents and the adjacent community prior to the issue of any formal approval of the project.</p> <p>Another specific concern will be the likely impact of the significant intensification of use on traffic, cyclist and pedestrian conditions in and around the estate. Detailed traffic management measures will be required particularly in relation to vehicle access to the site at Washington Avenue and Belmore Road North. This issue is discussed in greater detail in a later section of this submission.</p>	<p>The recommended conditions have been reviewed and the conditions that are appropriate to incorporate at the Concept Plan application stage will be included within the revised Statement of Commitments.</p> <p>A Crime Prevention Through Environmental Design Review will be undertaken as part of the Project/Development Applications for the future stages.</p> <p>Traffic safety is addressed further within this table, taking into account the specific comments regarding this issue.</p>

Issue	Response
Social Impact Assessment	
<p>Quality Housing</p> <p>The development appears to offer some advantages in offering wider housing choice and has potential to diversify the social mix of residents in the area. A key concern is the net loss of Social Housing in the community with the reduction in public housing stock from 176 to 150. No justification appears to have been given for the reduction in social housing stock and given the documented level of Housing Stress for residents of the Canterbury LGA and the large numbers of residents from Canterbury on social housing waiting lists, this represents a poor social outcome of the proposal.</p> <p>The increase in affordable housing is a clear benefit of the proposal but this does not mitigate the loss of social housing amongst clients unlikely to be able to afford home purchase. It is important to remember that social housing clients and affordable housing consumers are likely to represent different socio-economic groups and as such their needs must be met via the provision of a range of housing options. The increase of affordable housing will not meet the needs of those social housing clients that are moved or displaced due to the overall loss of social housing in the area. While some clients may choose to relocate out of the Riverwood area, due to demand for social housing in the Canterbury LGA it is important to retain at least the same level of social housing stock.</p> <p>Another related issue is the loss of three bedroom units in the locality. Our social profile highlights our unique position in accommodating a large number of families in two and three-bedroom units with five or greater number of household members. The loss of public housing with this capacity is a significant loss to the area and provides little housing choice to existing residents with large families or those on the social housing waiting list with larger families. A recent affordable housing study in the community highlighted an increased need for this type of accommodation as being a major issue for Canterbury's large families. As such, the loss of this housing stock is not supported.</p> <p>We would argue that the social housing units should be contained across all of the blocks using the community provider to manage a more random allocation of units across all of the buildings, rather than providing all the units in one residential building. This would certainly provide a better social outcome and more closely align with the Department's goal of integrating social housing in the community and would mitigate potential divisions between social housing and private tenants.</p> <p>The proposal will also substantially increase the residential density of the area. There is ample evidence that "high-rise living may be a catalyst for social exclusion...particularly public housing residents" (C Henderson-Wilson: Australian Housing Research Conference 2008). It argues that social connectedness can be strengthened through community development initiatives "such as community and roof-top gardens, cultural events and informal restaurant gatherings" and</p>	<p>The quantum of social housing is a matter for Housing NSW, however, the following points are noted:</p> <ul style="list-style-type: none"> ▪ The Social Impact Review undertaken by Urbis recognised that the elimination of 'bedsits' on the site is considered to provide for more desirable, up-to-date dwelling types. It also noted that the three-bedroom dwellings on the site are currently considered to be largely under-occupied, as a result of the ageing population profile of the estate and the associated increase in single person households. The social housing on the site is therefore proposed to be predominantly one and two bedroom seniors dwellings, to better cater for this identified population. ▪ A number of the existing social housing dwellings were unsuitable for occupation and as such, the actual net loss of social housing dwellings is reduced to only six dwellings. ▪ As a result of the federal stimulus, the net amount of social housing in the immediate area (Canterbury area) has been increased by 289 dwellings, providing a significant off-set against any loss of dwellings at Riverwood North. <p>In response to the comments regarding the potential mix of housing tenure, the following comments are noted:</p> <ul style="list-style-type: none"> ▪ It is not HNSW policy to mix social and private housing dwellings within a single building. This is due to issues relating to the Strata Titles Act that create difficulties for HNSW to administer over the long term (eg building maintenance, sinking funds, insurance, etc) and which are of a detriment to a prospective Community Housing Providers. ▪ HNSW has an established policy of not engaging in fractional ownership schemes based upon past negative experiences. ▪ Each of the proposed buildings will be designed to have a consistent external appearance that does not enable identification of individual buildings as social or private housing (similar to Bonnyrigg). <p>The proponent has held a number of consultation sessions with Council, the community and representatives of the Riverwood Community Centre where the proponent has demonstrated its commitment to work with community groups on an ongoing basis.</p> <p>To date, the proponent has partnered with the Riverwood Community Centre in sponsoring a number of community events, including:</p> <ul style="list-style-type: none"> ▪ Riverwood Festival ▪ Outdoor market umbrellas for the Riverwood Community Centre Café (social enterprise) ▪ 'Cinema in the Park' - a free community event for the Riverwood community <p>The proponent is continuing to assess community needs and develop initiatives for community capacity building and community enterprises. Suggestions for</p>

Issue	Response
<p>facilities which support these initiatives are expected to be enhanced through the development. The increased density will also put additional strain on a range of local community services. No provision is made in the documentation for offsetting this increase in demand for local services.</p> <p>It is therefore appropriate that some consideration be given to sponsoring or resourcing a community development position or additional resourcing to local services to assist in the delivery of programs and projects for new and existing residents. These programs and projects would aim to integrate residents, build community spirit and link residents to services.</p> <p>It should be noted that although Urbis SIA refers to the use of existing facilities locally to address this matter, there is some doubt as to whether these existing facilities can cope with increased demand from the expected additional 1500 residents brought in by the development.</p> <p>Until the proposed Voluntary Planning Agreement (VPA) is presented it is not certain what new facilities will be provided nor is it possible to assess their adequacy to meet the demand. Further comment can only be made on this aspect once the details of the VPA have been received. Further, the addition of facilities does not necessarily equate to an increase in the level of service provision for the area. An increase in service provision can only be facilitated by an increase in human resources for services. How an increase in staffing and program and project costs may be met is not canvassed in the SIA.</p>	<p>community development so far include:</p> <ul style="list-style-type: none"> ▪ Delivering the concept plan vision for better integrated public open space (eg garden square) which enable greater social interaction between social and private residents ▪ Continuing facilitation of community development initiatives and capacity building, including the development of specific social inclusion framework for Riverwood North ▪ Hosting/support of community events (such as cinema in park, markets, community BBQs, music) ▪ Assisting in planning of community social enterprises (café/gardening) to provide local jobs – eg community nursery on Council land ▪ Social enterprise in community space on the ground floor of proposed Building B ▪ Development of healthy older persons programme in conjunction with the new indoor sports centre ▪ Development of an online community portal to enable greater community involvement, participation, inclusiveness and connections <p>Each of the above suggestions has been discussed with the Riverwood Community Centre and received indicative positive support. Any commitment will be costed and form part of the proposed VPA.</p>
<p>Economic Viability</p> <p>This is another area where some positive impacts are likely, particularly in the short-term construction phase. In the long-term, improving access to “social enterprise” activities should have a continuing benefit to residents, though the funding and resourcing of these activities is uncertain. The large increase in households and close proximity to the retail areas of Riverwood is likely to assist local retailers. From a regional perspective it also would improve the utilisation of the M5, public transport and other infrastructure and promote the objectives of urban consolidation. On a local level, the increase in traffic and congestion may be the cause of some concern for resident amenity as outlined below.</p>	<p>As noted above, the proponent is keen to work with Council with regard to community capacity building, including community social enterprises to provide additional local employment opportunities and training. These matters will be considered further as part of the VPA negotiation.</p>
<p>Sense of Place and Community Networks</p> <p>The development may result in the relocation of the library and seniors facility which serve a social purpose, but the details of this proposal and other facilities proposed to promote community networks cannot be reasonably assessed without the details of any Voluntary Planning Agreement. As stated above, this still does not address the required increase in the provision of staffing and other resources to activate the new facilities and meet increased demand for services. The scale of the development will also create a significant landmark in the area. This may act to</p>	<p>The proponent is liaising with Council and the community to determine ongoing impacts on existing services and facilities and develop the commitments for addressing any impacts as part of the VPA.</p> <p>Integration of the social housing has been addressed from a number of dimensions, including (but not limited to):</p> <ul style="list-style-type: none"> ▪ Physical appearance of dwellings being non-distinguishable from private dwellings. ▪ Accessibility and permeability of open space.

Issue	Response
<p>separate residents of the development from the adjoining community without ongoing resourcing and community development through organisations such as the Riverwood Community Centre. As noted previously, of particular concern is the separation of the social housing unit block in Stage One from the private units proposed in later stages. This aspect of the development is not supported on social principles as the separation isolates the “social housing” tenants from the rest of the development and acts contrary to the departments stated intention of promoting the integration of social housing with the private housing stock.</p> <p>In order to integrate the development with the wider community and social landscape, wider public access to open areas is to be encouraged or contributions sought to provide for public open space and an adequate range of facilities under the Voluntary Planning Agreement. The documentation is unclear about access to common areas by residents of the wider general community. Given the likely imposition of the development, open public access to the recreation facilities provided in the development should be encouraged through appropriate signage, the provision of clear pathways for access and promotion of facilities wherever possible in the design.</p> <p>During the lengthy construction phase, it is also appropriate that consideration be given to establishing funds to support community development programs to promote community acceptance and social networks across the precinct. This will assist new residents to integrate into the area and will build community cohesion both internally on the development and with external community members and services.</p>	<ul style="list-style-type: none"> ▪ Urban design, particularly in relation to the public realm and the central location of social housing. ▪ Developing social sustainability through capacity building and community events and programs, as well as the appointment of a community development resource.
<p>Access to Facilities</p> <p>The addition of 474 households to the local community is likely to have a significant long term impact on the demand for local services and facilities. Depending on the demography of the occupants of the development, the demand for services and facilities could range from child care, aged support and personal care, libraries, youth activities, individual and family support and adult education. Many of these services are currently provided in the area by Council or through agencies operating in Council facilities such as Riverwood Community Centre.</p> <p>It is expected that a monetary contribution under Section 94(2A) of the Environmental Planning and Assessment Act, 1979, as per the schedule in Council's Contributions Plan or a suitable Voluntary Planning Agreement will be undertaken to address these concerns. There will be significant increases in demand for services as well as facilities and as such solely providing an increase in hard infrastructure will not provide adequate levels of service to the increased number of residents.</p> <p>As indicated in the Urbis SIA, the growth in population is likely to have a positive impact on primary school enrolments addressing excess capacity concerns locally. This is supported by the fact that one of the key</p>	<p>The potential impact of the development on existing services and facilities has been addressed earlier and any impacts will be addressed in the VPA.</p>

Issue	Response
<p>markets for the private housing will be young families with children and young couples who may have children in the near future.</p> <p>Given this projection, it also stands to reason that demands for services such as child care are likely to exceed current levels of provision. Although there are 233 child care places offered in the centres identified in the Urbis Social Impact Assessment (SIA), only four centres have minor vacancies and one centre has a waiting list of 54 children. The increase in the number of young families projected in the Urbis SIA will place significant pressure on existing facilities and the VPA should also consider the dedication of facilities and/or land to enable the development of one additional local child care centre into the future.</p> <p>Existing library facilities are dated and inadequate for the existing demand, let alone the increased demand that will be experienced as the development grows. The library currently falls well below current standards. A contribution is therefore expected under Section 94(2A) of the Environmental Planning and Assessment Act, 1979, as per the schedule in Council's Contributions Plan or a suitable Voluntary Planning Agreement to address these concerns.</p> <p>The site is expected to take in the current Senior Citizen's facility. The Urbis SIA foreshadows a replacement senior citizen's centre under the VPA and initial requests for space allocation may need to be upgraded in light of the assessed numbers of seniors anticipated for the site. Currently the existing senior citizens centre is fully booked on all mornings and most afternoons. Adding a significant number of additional seniors is likely to add to the pressure for multi-purpose use of the centre and space and design factors to promote shared use may need to take this into consideration. The ability for the space to be used as a multipurpose facility to accommodate some of the newer groups, for example, playgroups, will be essential.</p>	
<p>Sustainable Environment</p> <p>The environmental assessment report indicates minimal overshadowing as a result of the proposed construction and an enhancement of the area through prominent, well-designed buildings. However, the matter of the privacy and visual imposition on adjoining properties is a matter that is likely to be of concern to residents.</p> <p>Another significant issue related to the function of the project is the adequacy of proposed parking standards to be applied to the development and the differential standards that would be applied to social housing as distinct from the private housing. This results in a low level of parking provision which will require visitors to use the on-street road network.</p>	<p>The concept plan proposal outlines the basic shape of the development to be filled out later during the design development of each of the buildings.</p> <p>Addressing privacy and overlooking between apartments in the development will be an important aspect of this subsequent stage of the development. Screening devices may be appropriate in selected areas to enhance the privacy of internal spaces. The ongoing design of the precinct as a whole allows each building to be considered in light of the next, rather than treating each as a sole entity as is typically the case.</p> <p>The existing neighbouring properties are separated from the development by new and existing streets. Given the minimal overshadowing noted by Council, the visual imposition of the development will be manageable.</p> <p>The issue regarding car parking has been responded to previously.</p>

Issue	Response
<p>SIA Conclusion</p> <p>The Urbis SIA outlines a range of consultations that have been commenced as part of the development application process. However, public consultations on the proposal with the local community to date have been focussed by resident concerns about the impact of the construction phase on the relocation of existing occupiers, rather than the impact of the overall proposal on the community, both locally and in the wider Canterbury region.</p> <p>These consultations do not appear to have gained significant input on the likely broad community impacts of the scale and function of the development and this assessment raises significant potential concerns that need to be addressed as conditions of consent or in the Voluntary Planning Agreement.</p> <p>These impacts will be also need to be closely monitored during future phases of the development to identify suitable ameliorating measures that may assist reduce any overall negative impacts of the proposal and if these cannot be adequately identified at this stage funds should be sought under the Voluntary Planning Agreement to support community development activities including the provision of additional community access spaces and specific services such as child care, youth and aged recreation activities.</p>	<p>The proponent will continue to engage with the community as development and planning progresses, including throughout the VPA preparation and resolution.</p>
Stormwater Drainage	
<p>External On-site Detention</p> <p>The submitted stormwater report and plans indicate that there is an existing above ground detention basin on the northern side of the site adjacent to the constructed wetlands. This is incorrectly identified as most of the alleged storage area is in fact a major constructed overland flow path in the form of a constructed swale and creek which drain to Salt Pan Creek via the M5 corridor.</p> <p>The proposed major aboveground on-site detention in the proposed open space, picnic area and playground, at the northern side of the site between Phase 02 Stage 02 and 03 and Phase 02 Stage 04 is not permissible. It is located in an overland flow path which cannot be constrained. In addition, the proposed levels of the detention indicate that the designed has not identified that the major constructed overland flow path swale on the northern side of the northern boundary will not provide containment for the proposed detention.</p>	<p>Detention basin has been removed from DRAINS model and drawings. An amended stormwater management plan has been submitted with the PPR.</p>
<p>Street/Trunk Drainage</p> <p>The submitted catchment definition appears to relate only to the scope of the works proposed. Additional areas to the south of the redevelopment zone drain through the site via both pipes and overland flow from public and private land along Arizona Place, Kentucky Road, Roosevelt Avenue and Virginia Place.</p> <p>In the absence of full hydraulic details and modelling, it appears that the proposed site drainage system has</p>	<p>The area to the south of Washington Avenue is currently outside the catchment due to the presence of a bund. This bund may be removed when this site is redeveloped and Council has requested that the DRAINS model incorporates this catchment.</p> <p>The stormwater system is designed for a 1 in 10 ARI as there is a safe overland flow path from the OSD Tanks along the road reserve or other public land.</p> <p>An amended stormwater management plan is provided</p>

Issue	Response
<p>reduced capacity compared to the existing street drainage system and will not be capable of serving the full catchment draining via the proposed development zone. It is not possible to determine whether the proposed system is designed to accommodate additional flow from beyond the southern boundary of the development site.</p> <p>If the intention of the development is to hand over ownership of the street/trunk drainage system to Council on completion, the system shall be designed to satisfy the requirements of Council. Council requires that the street drainage system be designed to cater for the 1 in 10 year design storm where there is a safe overland flow path within the road reserve or other public land, 1 in 20 year design storm where the overland flow path travels over private land, and 1 in 100 year design storm where the overland flow path causes potential hazards to private property or areas highly sensitive to inundation.</p> <p>Detailed construction plans and calculations for the proposed street/trunk drainage are to be submitted for approval to Council's Director of City Works prior to the commencement of any construction works on the site. The plans are to include a long section drawing with a Hydraulic Gradient Analysis for all pipe reaches.</p> <p>A final Works-As-Executed plan, certification and details of any inspections undertaken during the course of the works are to be submitted to Council's Director of City Works for approval prior to a final inspection by Council and handover of the assets.</p>	<p>with the PPR. Detailed construction plans, calculations and longsections will be submitted to Council prior to commencement. Work-as-executed plans, certification and inspection details will be submitted to Council prior to final inspection and handover.</p>
<p>Overland Flow Paths</p> <p>Overland flow paths have not been adequately identified and documented on the submitted plans. The submitted stormwater report and plans fail to identify a major overland flow path from the proposed garden square and shared zone, through the centre of the group of buildings identified as Phase 02 Stage 02 and 03 towards the existing swale along the northern site boundary.</p> <p>The submitted stormwater report and plans fail to identify the existing constructed major overland flow path and constructed swale on the northern boundary of the site between the site and the constructed wetlands.</p> <p>Generally we have concerns regarding the overland flow from each lot and the road reserve, and the capacity and functionality of the street stormwater system and the receiving swale located along the northern site boundary.</p>	<p>The existing overland flow path and swale as illustrated on WSP C-07 Stormwater Drainage Proposed Layout Plan has been extended as agreed with Council.</p> <p>The route of overland flows from each lot has also been addressed with Council and it has been agreed that all areas can be catered for.</p>
<p>Gross Pollutant Trap</p> <p>We generally endorse the provision of a Gross Pollutant Trap (GPT) upstream of the development discharge point at the proposed connection to the existing 900mm Council stormwater pipe located under the swale along the northern site boundary. However, the proposed location within the proposed public open space is not acceptable. The proposed GPT is to be relocated to a space adjacent to Vermont Crescent to</p>	<p>The Gross Pollutant Trap has been moved to within close proximity of Vermont Crescent to allow vehicular and pedestrian access for cleaning and maintenance purposes.</p>

Issue	Response
<p>ensure that appropriate vehicular and pedestrian access is maintained for cleaning and maintenance purposes. As the ongoing care and maintenance of the GPT would be the responsibility of Council following completion of the works, detailed design drawings and documentation are to be submitted to Council's Director of City Works prior to the commencement of any works.</p>	
<p>Water Sensitive Urban Design</p> <p>The proposed bio-retention swales proposed within the road reserve are not supported. The concept included in the submitted plans fails to address the requirement of designing to minimise maintenance needs for the system. While the use of WSUD elements within the development is encouraged, careful consideration is to be given to the type, location, design and maintenance of these elements. The proposed bio-retention swales do not consider issues including removal of gross pollutants from the swales, diversion of flows greater than the design treatment flow, and maintenance requirements of swales within public land.</p> <p>We are of the opinion that labour intensive water sensitive urban design elements should be relocated to within each residential development lot. Detailed design drawings, documentation and calculations for each water sensitive urban design element to be located on public land are to be submitted to Council's Director of City Works prior to the commencement of any works on the site.</p>	<p>Council has advised that they are satisfied that no stormwater pipes shall be discharged into a blank pit and allowed to overflow into a swale system.</p> <p>WSUD treatments similar to the proposed have recently been employed by a number of LGAs including City of Sydney, Yarra Council and City of Kensington. Plant species used in street rain gardens are chosen for their ability to extract heavy metals from water; these plants are also low maintenance.</p> <p>Council indicated in the meeting on 25 November 2011 that while they are supportive of rain gardens and WSUD measures, certain site-specific factors will need to be addressed in the detailing for them to be successful. Turf Design Studio (TDS) will collaborate with Council on this design element to ensure the desired outcomes are achieved.</p>
<p>It is noted that the stormwater report alludes to the use of rainwater tanks within the development to capture roof water for reuse in toilet flushing and irrigation. Rainwater tanks are to be sized and configured in accordance with the requirements of any BASIX certificate obtained for this development.</p> <p>Should any of the captured roof water be intended for use in irrigating public open spaces, additional treatments including disinfection will be required. Detailed plans of any proposed treatment and reuse scheme for use in public open spaces will require approval from Council's Director of City Works prior to the commencement of any works.</p>	<p>All rainwater tanks will be sized and configured in accordance with the requirements of a BASIX certificate for the future stages. If captured roof water is to be used for irrigating open spaces, additional treatment including disinfection will be applied.</p>
<p>Rainwater Tanks</p> <p>All development lots within the site will require on-site stormwater detention (OSD). The OSD is to comply with the requirements of Council's Stormwater Management Manual ~ Specification 9 (SWMM~S9). Where a lot drains to an existing or proposed public road, storage is to be provided for the 1 in 10 year design storm. Where the drainage or overflow from a lot enters another lot, storage is to be provided for the 1 in 100 year design storm. Permissible site discharge for all lots is 150litres per second per hectare. While the SWMM~S9 allows for up to 25% of a site to bypass the detention, the bypass is to be accounted for in the discharge rate and storage volume of the detention system.</p> <p>The submitted plans include a suggested site storage</p>	<p>No OSD overflows shall drain through private lots and accordingly a 1 in 10 year design storm shall be utilised in the design. All PSDs shall be designed for 150l/sec/ha. 25% bypass rate not to be exceeded. This shall be part of detailed building and stormwater design at a later stage.</p> <p>Plans have been submitted illustrating the finished floor levels to provide better understanding of the relationship between the deck levels and the OSD tanks.</p> <p>Detailed design of each lot's drainage system will be submitted prior to commencement.</p>

Issue	Response
<p>volume, depth and invert levels. These levels and storages indicate that conformity to existing site levels will not be achievable and that significant portions of each lot will bypass the OSD. The proposed storages indicated on the plans will be located well below the existing receiving system, leading to incompatibility with the existing Council stormwater system adjacent to the Riverwood Wetland.</p> <p>Detailed site specific stormwater plans and on-site detention calculations for each development lot are to be submitted to Council's Director of City Works prior to the commencement of any works on the site. The plans are to include the location, details, dimensions and levels of all pits, grates, pipes, tanks, basins, drains, orifice plates and control pits.</p>	
<p>Internal Site Stormwater and On-site Detention</p> <p>The recommendations of the submitted geotechnical report by Jeffery & Katauskas Pty Ltd are to be adopted in the design and construction of all roads and road related infrastructure. The construction of any new roads and road related areas proposed as part of this development is required. The design and construction of the new roads required as part of the development is to be undertaken at the applicant's cost.</p> <p>The reconstruction of all existing roads onto which this proposal has frontage is required. All costs associated with the design and reconstruction of the existing roads is to be borne by the applicant. The reconstruction of all existing kerb & gutter within existing road reserves onto which this proposal has frontage is required. The reconstruction of all existing footpath within existing road reserves onto which this proposal has frontage is required.</p>	<p>The existing roads are proposed to be retained, however, the proponent will commit to the rectification of any damage arising from the demolition/construction process. Minor resurfacing works may also be undertaken, where required to enhance the appearance of the site. It is not proposed to reconstruct existing roads, having regard to the sustainability objectives for the project, including the environmental and economic impacts of replacing existing infrastructure that is to an appropriate standard.</p> <p>The detailed design for any road related infrastructure will be provided in the future Project/Development Application and any associated Construction Certificate. It is acknowledged that the proposed works will be undertaken at the cost of the proponent and will be required to comply with Council's requirements.</p>
<p>Traffic Considerations</p> <p>Traffic Generation</p> <p>The traffic statement indicates that the net increase in traffic generation is 114 vehicles per peak hour from the proposed development and therefore, would be more than twice of the existing traffic generation. The Consultant has analysed that the Level of Service for the intersections of Belmore Road/Hannans Road, Belmore Road/Washington Avenue and Belmore Road/Roosevelt Avenue will not be affected by the proposed development.</p> <p>The analysis for the proposed and existing traffic for the intersection of Belmore Road/Washington Ave does not include the right-turning vehicles from Washington Avenue onto Belmore Road. The report suggests that access is difficult at this intersection and this particular movement (right-turn) is taking place at the intersection of Belmore Road/Roosevelt Avenue.</p> <p>It should also be noted that our own data confirms that there is some accident history at these particular intersections. Our own investigation and observations in this locality during the morning and afternoon peak hour periods indicate the following:</p> <ul style="list-style-type: none"> There are extensive delays for vehicles turning right 	<p>The prohibition of the right turn from Washington Avenue into Belmore Road was suggested by Council at the pre-lodgement meeting and the Concept Plan application is consistent with that suggestion.</p> <p>The proposed installation of traffic signals was not discussed at the pre-lodgement meeting, however, it is noted that such a proposal would require RTA approval. Assessment by Varga Traffic Planning has suggested that the intersection does not meet RTA warrants and as such, is unlikely to be approved.</p> <p>In regards to the proposal to consider further intersection treatments, a traffic island could be provided in Washington Avenue to physically prevent right turn movements out of Washington Avenue.</p>

Issue	Response
<p>from Washington Avenue onto Belmore Road.</p> <ul style="list-style-type: none"> ▪ Southbound vehicles on Belmore Road turning right into Washington Avenue block the through traffic movements. ▪ Some drivers carry out dangerous traffic movements to egress from Washington Avenue to Belmore Road, with similar circumstances also applying at the intersection of Roosevelt Avenue and Belmore Road <p>The traffic assessment identifies these concerns and suggests that consideration be given to banning right-turn movements from Washington Avenue at Belmore Road and encourages drivers to use the intersection of Roosevelt Avenue/Belmore Road. We would in principle endorse this arrangement provided that traffic signals are installed at the intersection of Belmore Road and Roosevelt Avenue to provide a safer access to the precinct.</p> <p>In light of the existing accident history in this location, our own experience with the traffic in this locality and that the proposed development will more than double the existing traffic generation in this precinct, we are of the view that further consideration needs to be given to further intersection treatments in this locality.</p>	
<p>Pedestrians/Bus Stops</p> <p>No details have been provided in relation to pedestrian access from the proposed development to the street. It should be located so that it coincides with the existing pedestrian facility and bus stops. If new pedestrian linkages are proposed away from the existing pedestrian facilities, they must be installed in accordance with Roads and Traffic Authority Guidelines and the cost must be met by the applicant.</p>	<p>The proposed pedestrian access will be detailed in the future Project/Development Application and any associated Construction Certificate. It is acknowledged that the proposed access will be required to comply with relevant legislation.</p>
<p>Proposed New Streets</p> <p>No details have been provided regarding any proposed carriageway and footpath widths. All new proposed streets shall be provided in accordance with the relevant Roads and Traffic Authority and AMCORD Guidelines.</p>	<p>The detailed design for the proposed streets will be provided in the future Project/Development Application and any associated Construction Certificate. It is acknowledged that the proposed new streets will be required to comply with relevant legislation.</p>
<p>Proposed 10 km/h Shared Zone for Kentucky Road</p> <p>Council does not have the authority to approve a 10 km/h Shared Zone. In this regard, you will be required to obtain separate approval/advice from the Roads and Traffic Authority.</p>	<p>Noted and agreed. An application to the RTA will need to be made, supported by detail scale plans showing the proposed design layout of the shared zone, including traffic calming devices.</p>
<p>Landscaping</p>	
<p>ESD Principles</p> <p>We generally support the principles detailed in the document written by Windtech Consultants. The details provided are very broad and we would anticipate that such matters will be further addressed at individual project/development applications for individual future stages.</p>	<p>Noted and agreed</p>

Issue	Response
<p>BASIX Commitments</p> <p>It is expected that each development will have to complete BASIX assessment and submit such documentation at individual project/development applications stages. This assessment should provide detail on whether there will be water commitments relating to the planting of indigenous or low water species throughout the developments. This information should also be reflected in the detailed Landscape Plan(s) which will be provided for the individual project/development applications for individual future stages.</p>	<p>Noted and agreed</p>
<p>Landscape Concept Plan</p> <p>The landscape concept plan forwarded with the documentation is generally acceptable. A detailed landscape plan is to be provided for the individual project/development applications drawn in accordance to the requirements of DCP 45 – Landscape. Such plans should also take into consideration the relevant comments as detailed elsewhere in this submission.</p>	<p>Specific locations of lighting and other outdoor fixtures (eg signs, furniture) will be provided with issue of future Construction Certificate drawings.</p>
<p>Tree Management Plan – Property Trees</p> <p>Concerns are raised that the aims to protect and retain the significant trees on this property may not be achieved. Of particular concern is the trees numbered in the range of 52-62 on the submitted Existing Tree Assessment plan – drawing EV1. This plan shows the retention of these significant trees, however other information provided shows the placement of a significant stormwater infrastructure within this area which would have a significant impact on the existing significant mature trees. Issues such as this must be clarified and in this regard, further details should be provided showing the tree protection fencing for each tree to be retained and protected during construction.</p>	<p>Current proposal for trees retained in the range of 52-62 sees the existing levels unchanged. The proposed design will ensure potential inundation of these trees does not exceed current levels.</p> <p>Tree protection measures will be detailed in the future Project/Development Application and any associated Construction Certificate.</p>
<p>Street Trees</p> <p>All street trees are to be retained and protected except where detailed in specific landscape conditions provided in the attached documentation.</p> <p>The submitted Landscape Masterplan, drawing number LA4 (drawn by Turf Landscape Architects and Urban Design) shows the replanting of street trees along Vermont Crescent. No further detail is provided for these new plantings. Further details of these plantings are to be provided at the individual project/development applications for individual future stages.</p> <p>A suggested street tree planting species is <i>Tristanopsis laurina</i> (common name Water Gum). This tree is currently being used as native street tree planting within the Canterbury LGA. In this regard, all new street tree plantings are to consider the existing street tree planting patterns for Canterbury LGA and the immediate surroundings of the proposed development. Consideration should also be given to the creation of successful ‘avenues’ of plantings and as such new street tree plantings should be considered in areas outside the noted scope of works. An example of</p>	<p>Further information in regards to species selection will be detailed in the future Project/Development Application and any associated Construction Certificate.</p> <p>Planting proposed for the site incorporates species from two indigenous ecological communities Turpentine / Ironbark forest and Shale / Sandstone Transition Forest. This will both ensure compatibility with the environment and soils, and promote local biodiversity. Links with the site’s historical use as an American Army Base Hospital are also proposed with the planting/potential transplanting of exotic spp. such as <i>Liquidambar styraciflua</i> and <i>Acer negundo</i>.</p> <p>Turf Design Studio has accepted Council’s suggestion for <i>Tristanopsis laurina</i> to be included as an evergreen native street tree within the proposed development. Water Gums are great street trees, particularly in areas where overhead wires present a height constraint.</p> <p>A desired outcome of the Green Street upgrade is to create shaded corridors for vehicles and pedestrians, which also works to reduce the urban heat island effect. Where appropriate, evergreen native species</p>

Issue	Response
<p>this is the proposed street tree plantings shown on the Landscape Masterplan - LA4 for Washington Avenue. The proposed street tree plantings are only shown on the northern side of the Avenue and not on the southern side of the street. Consideration should be given to creating an avenue of plantings which are planted at the same time in a considered and designed manner.</p>	<p>that cast a greater amount of shade than water gums will be proposed. Locations of individual specimens and proposed species will be provided at the Construction Certificate stage.</p>
<p>Playground Accessibility</p> <p>The proposed playground in Central Park should be created as an inclusive playground fit for use by children of all abilities. The playground must focus on integrated play activities for all children rather than segregated play zones for disabled and able bodied children. Non-prescribed play activities should also be considered such as the use of nature, sensory and theatrical play opportunities. Further detail of this playground and its accessibility is to be provided at the individual project/development applications for individual future stages.</p>	<p>Presence of several playground facilities immediately adjacent to site make a more passive park space appropriate for Central Park.</p> <p>Footpaths are provided along key desire lines to ensure equitable access for all users. All areas of Central Park are wheelchair accessible.</p> <p>Further detail in the form of plans, sections, and 3D views will be provided in the future Project/Development Application and any associated Construction Certificate.</p>
<p>Park and Street Lighting</p> <p>No detail has been provided on the levels and types of lighting to be provided within the proposed development. Access paths are to be well lit. Other areas which people are not to be encouraged to be at in the evenings are to be lit at a different level. Further detail of the proposed lighting for the development should be provided at the individual project/development applications for individual future stages.</p>	<p>Noted and agreed - the proposed lighting treatment will be detailed in the future Project/Development Application and any associated Construction Certificate.</p>
<p>Garden Square – Shared zone</p> <p>The detail and resolution of the proposed 'informal road alignment' of this area, as noted on the Landscape Masterplan – LA4, is to be clarified. The clear delineation of pedestrian and pedestrian/vehicle zones is important for the safety of users. The use of varying surface materials and treatments is to be considered. Further detail for this area should be provided at the individual project/DAs for individual future stages.</p>	<p>Noted and agreed – further information will be detailed in the future Project/Development Application and any associated Construction Certificate.</p>
<p>Accessibility of all access paths</p> <p>Accessibility is to be considered for all proposed main thoroughfares and site connections.</p>	<p>Noted and agreed – equitable access has been provided for all proposed main thoroughfares and site connections.</p>
<p>Library Plaza</p> <p>There is some ambiguity in the scope of the projects works. The area around the existing Senior Citizens centre has been identified as having some landscape works and has been labelled as a Library on the submitted Landscape Masterplan – drawing LA4 and LA5. This area has not been marked as being within the scope of works on the Concept Plan – CP105. This ambiguity is to be clarified and further detail of the landscaping of Library Plaza and the surrounding area should be provided at the individual project/development applications for individual future stages.</p>	<p>Noted and agreed – ambiguity has been clarified in revised submission from Turf Design Studio in association with the Concept Plan and in the future documentation for the Stage 1 Project Application.</p>

Issue	Response
<p>OSD and through site connections</p> <p>The area identified as 'Through Site Connections' on the submitted Landscape Masterplan – drawing LA4, has previously been identified as a stormwater detention basin. This area has been marked to include seating and picnicking facilities. These facilities can not be provided directly in the OSD areas. This is to be clarified and further detail of this area should be provided at the individual project/development applications for individual future stages.</p>	<p>Noted and agreed – further detail in the form of plans, sections and 3D views has been provided in the revised submission from Turf Design Studio in association with the Concept Plan and in the future documentation for the Stage 1 Project Application.</p>
<p>Site furniture</p> <p>No detail has been provided on site furniture to be provided within the proposed development. Consideration should be given to the placement of street furniture, appropriate for the character of the development, along the main access routes. Further detail of the site furniture should be provided at the individual project/development applications for individual future stages.</p>	<p>Noted and agreed - the proposed site furniture will be detailed in the future Project/Development Application and any associated Construction Certificate.</p>
<p>Recommended Conditions</p> <p>Refer to attachment to Council submission for full list of conditions</p>	<p>Overall, the draft conditions appear to comprise a significant amount of detail that is not necessarily appropriate to a Concept Plan application or works that are not included within the proposal (ie demolition, road reconstruction, etc).</p> <p>However, the draft conditions of consent have been reviewed and where appropriate, have been included within the revised Statement of Commitments in Section 5.</p>

3.4 Riverwood Community Centre Inc

The issues raised by the Riverwood Community Centre Inc in their written submission dated 4 January 2011 are listed in the following table, accompanied by the proponent responses to each of those issues.

The table references where the response includes a modification to the original Concept Plan documentation (as outlined further in **Section 4**) and/or a modification of the original Draft Statement of Commitments (as listed in **Section 5**).

Issue	Response
Social Impact Review	
We are concerned re the identification of the area being referred to as the Riverwood North Estate. It was presented to us that the project was to be called the Riverwood North Urban Renewal Development, and this did not indicate to us that the Estate would then be referred to as the Riverwood North Estate. The area is and has been historically called the Riverwood Estate, a name which the community strongly identify with. We believe that unless there is major community consultation and agreement for a name change the area should correctly be referred to as the Riverwood Estate.	The use of ' <i>Riverwood North</i> ' in the planning documentation is intended to identify the part of the Riverwood Estate that is the subject of the current renewal project. There is no suggestion to exclude the renewal area or change the current identification of the broader site as the Riverwood Estate.
There are numerous references to access to the Riverwood Community Garden, whilst there has been no consultation around this or how this may impact on the garden. Currently the community garden is for social housing tenants who live on the Riverwood Estate.	<p>The Concept Plan seeks to improve access from the Riverwood Estate to Salt Pan Creek Reserve, including the Riverwood Community Gardens, through the proposed land swap and north-south access roads. A new public open space link will be provided from Vermont Crescent to Salt Pan Creek Reserve. However, the proposed link will not impact on the community gardens, which are located approximately 20 metres to the west.</p> <p>The Concept Plan notes that there may be scope to expand the gardens to meet the potential demand arising from the additional residents. However, this would be subject to further consultation and discussion with key stakeholders prior to any detailed design work being undertaken. Such a proposal would be included within the Voluntary Planning Agreement.</p> <p>There is no suggestion that the current management structure of the existing community gardens would change.</p>
According to information given on a regular basis by the Campsie LAC to the Riverwood Estate Advisory Board, the Riverwood Estate is no longer seen as a distinct "crime hotspot", particularly with regard to break and enter. It is our understanding crime on the Riverwood Estate has reduced dramatically in recent years and is among the lowest for the Canterbury area. Housing and place design is a welcome aspect of the planning which can make a contribution in maintaining this.	A Crime Prevention Through Environmental Design review will be undertaken at the Project/Development Application stage so that the architectural drawings will address issues such as natural surveillance and the like.
We state our concerns re the loss of 26 social housing properties through the development replacing only 150 units of existing 176 being demolished while the demand for social housing is so high. When the concept of this development was first presented to the	<p>The potential loss of social housing is a matter for Housing NSW, however, the following points are noted:</p> <ul style="list-style-type: none"> The Social Impact Review undertaken by Urbis recognised that the elimination of 'bedsits' on the site is considered to provide for more desirable,

Issue	Response
<p>community (2008) it was said that 200 of the new dwellings being built would be for social housing tenants.</p>	<p>up-to-date dwelling types.</p> <ul style="list-style-type: none"> A number of the existing social housing dwellings were unsuitable for occupation and as such, the actual net loss of social housing dwellings is reduced to only six dwellings. As a result of the federal stimulus, the net amount of social housing in the immediate area (Canterbury area) has been increased by 289 dwellings, providing a significant off-set against the loss of dwellings at Riverwood North.
<p>We are concerned that though the information sessions only talked about 5 storey buildings, the review documents talk of 5 to 9 stories high. Riverwood Estate currently has 2 by 8 floor high-rise buildings. These building have posed a range of issues over many years especially when they accommodated families. It has been our understanding that Housing NSW would never again build high-rise blocks so why allow a Developer.</p>	<p>The community information sessions referred to building heights ranging from four to nine storeys, which is consistent with the Concept Plan application.</p> <p>The buildings to be used for social housing have been designed specifically for seniors, with appropriate access, including direct paths of travel and lifts.</p> <p>The buildings to be made available for private sale will enable housing to be delivered at an appropriate price point, providing the opportunity for people who may not be able to afford a different housing type, such as a detached dwelling house, to purchase their own home.</p>
<p>Stakeholder and Community Engagement</p> <p>The Riverwood Estate is currently recognised for being a strong, well connected community that celebrates and values its diversity. The changes proposed will impact on the existing community dynamics and there needs to be an ongoing commitment by the Developers to embrace, recognise and work with these existing community structures so that the community maintains its character of community inclusiveness.</p> <p>The Riverwood Community Centre currently supports a range of tenant participation infrastructures which facilitates active community participation including the Riverwood Estate Advisory Board which meets monthly and is comprised of representatives from the Riverwood Community Centre, Housing NSW Local Office, Canterbury City Council, Campsie LAC, St George Community Housing and tenant representative from 5 neighbourhood committees, the Riverwood Tenant Association, Arabic and Chinese Associations. The Board meets monthly to discuss both housing and social issues on the Riverwood Estate. We would like the Developers to actively participate on this Board around consultation on the project and for providing ongoing updates on the development. This would be a key move to ensure the ongoing involvement of the local community in the planning and development process and ensure the building of a health trust – based relationship with residents that is spoken of in the report. It would also ensure an understanding by the Developers of the impact the development has and will have on current residents and their reactions and feeling to changes in their community.</p> <p>We would be interested in how and when resources for the long term will be provided for development of community development initiatives to strengthen social cohesion and address the integration of new and existing communities during the development and post</p>	<p>The proponent has held a number of consultation sessions with Council, the community and representatives of the Riverwood Community Centre where the proponent has demonstrated its commitment to work with community groups on an ongoing basis.</p> <p>To date, the proponent has partnered with the Riverwood Community Centre in sponsoring a number of community events, including:</p> <ul style="list-style-type: none"> Riverwood Festival Outdoor market umbrellas for the Riverwood Community Centre Café (social enterprise) 'Cinema in the Park' - a free community event for the Riverwood community <p>The proponent is continuing to assess community needs and develop initiatives for community capacity building and community enterprises. Suggestions for community development so far include:</p> <ul style="list-style-type: none"> Delivering the concept plan vision for better integrated public open space (e.g garden square) which enable greater social interaction between social and private residents Continuing facilitation of community development initiatives and capacity building, including the development of specific social inclusion framework for Riverwood North Hosting/support of community events (such as cinema in park, markets, community BBQs, music) Assisting in planning of community social enterprises (café/gardening) to provide local jobs – eg community nursery on Council land Social enterprise in community space on the ground floor of proposed Building B Development of healthy older persons programme in conjunction with the new indoor sports centre

Issue	Response
<p>development. While we are aware that a one day community relations position is currently being funded to build relationships with key stakeholders we would like to see the plans for a commitment of how this will continue occur.</p>	<ul style="list-style-type: none"> Development of an online community portal to enable greater community involvement, participation, inclusiveness and connections <p>Each of the above suggestions has been discussed with the Riverwood Community Centre and received indicative positive support. Any commitment will be costed and form part of the proposed VPA.</p>
<p>Timing of the Project</p> <p>To date the current meetings with residents who live on the estate have been of an information sharing nature rather than consultation and residents have been overwhelmed with the relocation process of the tenants who are required to move for the development to take place.</p> <p>The length of time allocated for the development of this new housing project of up to 9 years will mean there will be a lengthy and ongoing disruption to the community, how this will be managed, aesthetically (ugly fenced off area, opportunities for vandalism of unused property/land)), noise during construction period, available access e.g. community garden, other end of Kentucky Road is unclear in the report.</p>	<p>The proponent has undertaken a number of detailed consultation sessions with various community stakeholders (including Riverwood Community Centre representatives) regarding the project in order to seek the feedback and input. The community development initiatives listed in the previous item were in direct response to meetings with the Riverwood Community Centre. There have also been a number of consultation sessions directly with social housing tenants which have actively sought their input and feedback.</p> <p>The site will be turfed following demolition with general resident access available across the site, apart from the areas directly affected by the staged construction, which will be fenced. Ongoing community access to the site was discussed during the community consultations. Access to the community garden will be maintained throughout the project.</p>
<p>Open Space Networks</p> <p>While the concept plans talk of enhancement to environment and pedestrian amenity there is concern over the loss of the only area, that of Washington Park, (a Council owed area developed with housing tenants in 1986) that provided open space for young people to play and kick a ball around. It is currently regularly used by youth workers for on the Estate activities. No like area is considered in the site area to replace it though it hopes to attract families.</p> <p>We believe it would be appropriate to find a way of incorporating the open space of the existing high-rise building across from the development into the open space networks proposed.</p>	<p>It is proposed to enter into a land swap arrangement with Council, which will result in the Council owned land at Washington Ave (Lot 459 - approximately 2350m²) being replaced with a new area of public open space of approximately 2500m².</p> <p>The proposed replacement open space will link the underutilised open space at Lot 450 on Vermont Crescent with Salt Pan Creek Reserve, creating a new open space green belt and improve through site connectivity to the wetland reserve and community gardens. Direct connections will be provided from the social housing dwellings to the south through to the new open space and Salt Pan Creek Reserve via the new north-south access roads between Washington Avenue and Kentucky Road.</p> <p>Overall, the Concept Plan will increase the area of public open space and improve the existing amenity through the upgrade of existing public open space (Lot 450), embellishment of proposed new public open spaces and creation of a new garden square on Kentucky Road.</p>
<p>Council buildings/development</p> <p>When the original concept of the redevelopment of the area was presented to the community it included the up -grade of Seniors Citizens Centre a building which is currently fully utilised by an aging and multicultural community, plus the relocation of the Riverwood Library, community room and public toilets available for the community garden. Currently they are now talked about as maybe, potential proposals, though throughout the reports they are referred to as integral</p>	<p>The proponent and Housing NSW are continuing to liaise with Canterbury Council regarding the provision of community infrastructure that will meet the future demands of this community, including the relocation of the Riverwood Library to a new building on the corner of Washington Avenue and Kentucky Road, which will also accommodate the Riverwood Senior Citizens Centre.</p> <p>The revised Statement of Commitments includes the</p>

Issue	Response
<p>to the development especially with regard to development location of the social housing units. These facilities were listed as a positive perhaps the alternative to views of wetlands area, access to community garden which the private development units will have access to. What real commitment is there to the development of these facilities?</p>	<p>negotiation of a voluntary planning agreement for the provision of local Infrastructure.</p>
<p>In maintaining and building an inclusive community it is important that all community initiatives are inclusive of the whole community, it is unclear as to whether the ideas outlined by Payce are just to be for the new community or the Riverwood Estate community.</p>	<p>The community programmes suggested by Payce (eg community events, job creation, etc) have been developed and designed in consultation with the Riverwood Community Centre and will be available to the broader community. These will be included within the VPA, as considered appropriate.</p>
Environmental Assessment	
<p>Development Description</p> <p>Talks about exclusive open space area will be for the exclusive use by residents and their guests – This seems to contradict the notion of building an inclusive/integrated community for the residents of the Riverwood Estate.</p>	<p>The project provides for a clear hierarchy of open space, including:</p> <ul style="list-style-type: none"> Public open space that is accessible to the entire community Communal open space which is accessible for residents of a building or buildings. Private open space which is accessible only by the residents of the adjoining dwelling <p>The CPTED provisions recognise the importance of differentiating between these spaces to avoid any potential confusion with regard to site ownership and control. Communal open spaces are designed to provide for visual privacy between dwellings of adjoining buildings and provide an appropriate level of residential amenity for the occupants of apartment-style dwellings. It is not considered appropriate to provide general public access to privately owned land for a variety of reasons, including safety and security, insurance liability and the like.</p>
<p>Transport and Accessibility Impacts</p> <p>With the increase of population of nearly 33% expected on the Riverwood Estate due to this development and the fact the new 500 private units could possibly have up to 2 cars in an area which is recognised for low car ownership the community is extremely concerned about the impacted increased traffic will have on intersections and movement of traffic along Belmore Road.</p> <p>The community in the past have raised issues of concern with the Canterbury Traffic Committee re entry to the Estate at Washington Ave, parking along Belmore Road which obscures drivers vision turning right from out of Truman, difficulties turning right out of Community Centre Car Park and bus access to the existing south end of Kentucky Road. The report though seems dismissive that traffic will present a problem. The community envisages major traffic difficulties and would like to see the traffic issue addressed alongside the plans for this development.</p>	<p>The Traffic and Parking Assessment Report was prepared based on a comprehensive analysis of the intersections identified by both the RTA and Council. The report has concluded based on this analysis that:</p> <p><i>‘The proposed development will not have any unacceptable traffic implications in terms of road network capacity, and does not generate a need for any upgrades or road improvements’.</i></p>

Issue	Response
Existing Trees Residents have asked if the existing large and beautiful trees in Washington Ave (in front of 9, 11 Washington) will be preserved.	The Landscape Proposal submitted with the Concept Plan application provided recommendations regarding the trees to be retained, taking into account both the potential impacts of the proposed future buildings and the significance of individual trees. It is anticipated that the identified trees will be removed to facilitate the construction of Buildings A, B and C, however, it is noted that a significant number of mature trees will be retained, with supplementary planting along the local road network and within both the private and public domain to off-set the loss of existing trees.

3.5 Roads and Traffic Authority NSW

The Roads and Traffic Authority provided comments in an email dated 10 February 2011 which stated:

The RTA does not object to the current Concept Plan proposal for the abovementioned Major Project Application in its current form. However, the RTA notes that Canterbury Council has made a request for the introduction of traffic signals at the intersection of Belmore Road and Roosevelt Avenue and the introduction of a right turn ban at the intersection of Belmore Road and Washington Avenue based on on-site observations and crash data that was submitted to the RTA.

The RTA would like to advise that the introduction of traffic signals at the abovementioned intersection requires the approval of the RTA under Section 87 of the Roads Act, 1993 and the RTA will only approve traffic signals if the appropriate warrants are met in accordance with the RTA's Traffic Signal Design Guide, Section 2 - Warrants. The RTA will request from the traffic consultant (Varga Traffic Planning) that an electronic copy of the SIDRA intersection analysis files be submitted to the RTA for review to determine whether traffic signals at the abovementioned intersection are warranted.

Once the electronic SIDRA files have been submitted to the RTA, the RTA will respond to the Department of Planning advising whether traffic signals meet the warrants. In this regard the RTA requests that any future traffic report for the Project Application stage that any traffic report submitted for the proposed development provide an analysis of the proposal for traffic signals at Belmore Road and Roosevelt Avenue should it be found that traffic signals are warranted at the abovementioned intersection.

A Statement of Commitment has been provided committing to the preparation of a traffic report in accordance with the above requirements.

3.6 Transport NSW

The issues raised by Transport NSW in their written submission dated 10 January 2011 are listed in the following table, accompanied by the proponent responses to each of those issues.

Issue	Response
Car Parking for Private Residents The proposed parking rates are in excess of the requirements outlined in the City of Canterbury (Council's) Development Control Plan No 20 and the site is within close proximity to good public transport services. It is recommended that parking rates be provided in accordance with the rates identified in Council's DCP No 20.	The proposed car parking rates are in accordance with the provisions of DCP 20, with the exception of the social housing component, which are lower.

Issue	Response
<p>Public Transport Mode Share</p> <p>A commitment from the proponent to a package of measures for implementation upon project approval is requested at the concept plan stage TNSW requests that as a minimum, the following measures be identified:</p> <ul style="list-style-type: none"> a. the quantum and general location of car share spaces for the precinct. Car sharing spaces should be located in convenient, priority locations and potentially provided for employees at a discounted rate; b. the location of bicycle parking for residents, employees and visitors to the site. All visitor bicycle parking should be located in well lit and sheltered locations close to building entrances. Facilities for cyclists should be provided, as a minimum, according to the design principles specified within the <i>NSW Planning Guidelines for Walking and Cycling</i>; c. bicycle routes providing access to and through the subject site; and d. commitment to the preparation of Travel Access Guide (TAG) for residents and visitors to the site. Information on the preparation of TAGs is available at www.rta.nsw.gov.au. 	Noted and agreed

3.7 Sydney Water

The issues raised by Sydney Water in their written submission dated 14 December 2010 are listed in the following table, accompanied by the proponent responses to each of those issues.

Issue	Response
<p>Water</p> <p>The existing drinking water system has sufficient capacity to service the proposed development. The developer will need to design and construct a 200mm water main between points A and B and E to F as shown on the plan below.</p> <p>Sydney Water also required that the existing 150mm wastewater main is upsized to a 200mm main from Points B to C, C to D, C to E and F to G as shown on the plan below.</p> <p>The extensions will need to be sized and configured according to the Water Supply Code of Australia (Sydney Water Edition WSA 03-2002). Evidence of Code compliance should be attached with the extension design.</p>	<p>Sydney Water shall undertake a Study of Feasibility Investigation and produce a Notice of Requirements, confirming whether the proposed upgrade of the existing water main to 200mm is required or not.</p> <p>This work will be undertaken in response to the staged redevelopment of the site. A Feasibility Study will be undertaken by Warren Smith and Partners at a later date.</p>
<p>Wastewater</p> <p>The existing wastewater system has capacity to service the proposed development. Sydney Water requires that the existing 225mm wastewater main is upsized to 300mm between points A to B as shown on the plan below.</p> <p>The developer is also required to design and construct a 300mm wastewater main from point B to C. This will provide a point of connection at least 1 metre inside the property's boundary. From point C, the developer is required to design and construct the relevant</p>	<p>Sydney Water shall undertake a study of the Feasibility Investigation and produce a Notice of Requirements, confirming whether it has additional capacity to service the development.</p> <p>This work will be undertaken in response to the staged redevelopment of the site. A Feasibility Study will be undertaken by Warren Smith and Partners at a later date.</p>

Issue	Response
<p>wastewater infrastructure to service all of the proposed apartment buildings.</p> <p>The extensions will need to be sized and configured according to the Sewerage Code of Australia (Sydney Water Edition WSA 02-2002). Evidence of Code compliance should be attached with the extension design.</p>	
<p>Sydney Water Servicing</p> <p>Sydney Water will further assess the impact of the development when the proponent applies for a Section 73 certificate. This assessment will enable Sydney Water to specify any works required as a result of the development and to assess if amplification and/or changes to the system are applicable. The proponent must fund any adjustments needed to Sydney Water infrastructure as a result of any development.</p> <p>The proponent should engage a Water Servicing Coordinator to get a Section 73 certificate and manage the servicing aspects of the development. The a Water Servicing Coordinator will ensure the submitted infrastructure designs are sized and configured according to the Water Supply Code of Australia (Sydney Water Edition WSA 03-2002) and the Sewerage Code of Australia (Sydney Water Edition WSA 02-2002).</p>	Noted

4 Modifications to Concept Plan

The Concept Plan drawings have been amended to respond to the matters raised by the Department of Planning, Canterbury City Council and other key stakeholders.

- **Architecture:** the architectural documentation prepared by Turner + Associates that outlines the indicative layout and appearance of the proposed future buildings has been amended to increase the setback of the western building to Washington Avenue.
- **Landscape:** the following modifications have been made to the drawings prepared by Warren Turf design Studio and provided in the Concept Plan:
 - LA3 - community gardens extension removed due to conflict with overland flow path.
 - LA4 - notation no.1 – Central Park – proposed play equipment deleted due to presence of several playground facilities immediately adjacent to site and creation of a more passive space appropriate for Central Park.
 - LA4 – notation no. 7 – community gardens extension revised to community garden breakout space to ensure maintenance of current overland flow path.
 - WP1 – permeable paving included in proposed WSUD treatments to further mitigate flows.
 - WD1-WD4 – detail WD1 revised and additional details added to address Council's request for lower maintenance design solutions and inclusion of permeable paving to maximise water infiltration on upper slopes.
 - All drawings have been revised to ensure the potential future library is no longer in proposed scope.
- **Stormwater, Civil and Services Infrastructure:** the following modifications have been made to the drawings prepared by Warren Smith and Partners and provided in the Concept Plan:
 - C-04 Stormwater Drainage - Existing Catchment Plan: the catchment to the south of Washington Avenue has been extended as per Council's request.
 - C-05 Stormwater Drainage - Existing Layout Plan: the detention basin has been removed and the RLs and ILs of stormwater infrastructure have been added
 - C-06 Stormwater Drainage - Proposed Catchment Plan: the catchment to the south of Washington Avenue has been extended as per Council request, with minor changes to previous catchments.
 - C-07 Stormwater Drainage - Proposed Layout Plan: the gross pollutant trap has been relocated adjacent to Vermont Crescent as per Council request. Further, all road drainage has been upsized to a minimum 375mm, OSD Tank 6 has been added and there have been minor changes to the configuration of road drainage and levels.
 - C-08 Basement Floor Levels Plan: new drawing added
 - C-09 Ground Floor Levels Plan: new drawing added
 - C-10 Sydney Water Watermain Servicing Plan: new drawing added.
 - C-11 Sydney Water Sewer Main Servicing Plan: new drawing added.

5 Revised Statements of Commitments

The following outlines the revised Statement of Commitments proposed by Housing NSW. The updated Statement of Commitments includes original recommendations provided in the specialist consultant reports submitted with the Environmental Assessment, as well as additional recommendations arising from the responses to the key issues raised by the during the public exhibition of the Concept Plan.

Built Form and Urban Design

1. The architectural drawings required to be lodged with the future Project/Development Applications are to be generally consistent with the Concept Plan Submission prepared by Turner + Associates and with various revisions dates.
2. The landscape drawings required to be lodged with the future Project/Development Applications are to incorporate Water Sensitive Urban Design measures, taking into account the opportunities identified in the Landscape Proposal prepared by Turf Design and dated 3 February 2011.

Environmental and Residential Amenity

3. Shadow diagrams demonstrating the potential overshadowing impacts of the proposed buildings on 21 June, 21 December and 21 March/September at 9.00am, 12.00noon and 3.00pm are to be prepared and lodged with the future Project/Development Applications.
4. The detailed design of the development proposed in the future Project/Development Applications is to incorporate the following recommendations to avoid adverse wind impacts:
 - The species of trees selected for the footpaths along Kentucky Road, Green Street, the Through Site Link, and along Washington Avenue, should be of an evergreen and moderately well-foliating variety. The requirement for an evergreen species of tree is important for these areas since they could otherwise be exposed to the westerly winds, which tend to occur most frequently during the winter season for the Sydney region.
 - The inclusion of the remaining proposed trees within and around the site will also assist in mitigating adverse winds.
 - Private balconies should not be designed to be protruding from the corner of a building, where winds tend to be accelerated. If balconies are located near the corner of a building, it may be necessary to include a full-height screen along the side of the balcony (which will effectively transform the balcony into a single-aspect balcony). Impermeable balustrades may also be necessary for some of the private balconies.
 - Care should be taken in the location of rooftop terrace areas, if these are to be part of the design. These types of areas are exposed to the prevailing winds and possibly even up-washed winds from the building façade below. A combination of impermeable balustrades, scattered vegetation and awnings/canopies may be necessary to mitigate adverse winds for these types of areas.
 - As with any situation involving high-rise outdoor areas, the use of loose glass-tops and other light-weight sheets or covers (including loose BBQ lids) is not appropriate. Lightweight furniture is not recommended, unless it is securely attached to the balcony floor slab.

Crime Prevention

5. A Crime Prevention Through Environmental Design Assessment report is to be prepared at the Project/Development Application stage for each of the future stages.
6. Access points to the building (including lifts and stairwells) shall be restricted to residents only through a security system. Visitors should be provided with access via the intercom.

7. Any proposed front fences for dwellings should be visually permeable and provide residents with confidence regarding the separation of the public sphere.

Disability Access

8. An access review is to be undertaken at the detailed design stage for each of the future stages and submitted with the relevant Project/Development Application. The access review shall address compliance of:
- Social housing dwellings, including apartment layouts, communal areas and access, with relevant provisions for older persons, people with disabilities and/or mobility issues.
 - Private dwellings, including number of adaptable apartments, communal areas and access, with relevant provisions, including SEPP 65, AS1735.12 and AS 4299.
 - Roads, footpaths and kerb ramps with AS 1428.1 and any new bus stop/bus stop incorporating a bus shelter with the Disability Standards for Accessible Public Transport (2002).
 - Accessibility of additional public open space areas to older persons and people with disabilities.

Staging

9. The first Project Application will include the three residential flat buildings comprising the 150 social housing dwellings suitable for seniors adjacent to the corner of Washington Avenue and Kentucky Road, construction of new streets and public domain improvements, including garden square and landscaping of public open space.

Transport and Accessibility Impacts

10. A traffic report is to be provided with the Project Application for Stage 1 that includes an electronic copy of SIDRA intersection analysis files. The RTA is to determine whether the following works are warranted:
- Installation of traffic signals at the intersection of Belmore Road and Roosevelt Avenue.
 - Denial of right-turn movements from the intersection of Belmore Road and Washington Avenue with the installation of an appropriate traffic management device.

Analysis of the proposal for traffic signals should be provided if it is found that traffic signals are warranted. Approval shall be sought from the Canterbury Local Traffic Committee and the Roads and Traffic Authority.

11. The proposed 10 km/h Shared Traffic Zone in Kentucky Road shall be approved by the Roads and Traffic Authority.
12. Car parking is to be provided in accordance with the following rates:
- Social housing - 1 space per 10 dwellings
 - Private dwellings: 1 bed dwelling – 1 space, 2 bed dwelling – 1.5 spaces and 3 bed dwellings – 2 spaces
 - Visitors – 1 space per 6 apartments
13. Sustainable transport measures are to be implemented in Stage 1 of the renewal process, including:
- Establish high quality and efficient pedestrian and cycle links to existing routes.
 - Incorporate fibre/internet connections to each dwelling

- Community education to support public transport initiatives, including information packs for residents that identify walking, cycling and public transport options.

Infrastructure Funding

14. A voluntary planning agreement (VPA) is to be entered into between the proponent and Canterbury City Council to facilitate the staged delivery of physical infrastructure works, including the public open spaces, garden square and any additional works, and community capacity building initiatives. The VPA is to be executed prior to the release of the first Construction Certificate for dwelling construction.

Social Impacts

15. The proponent will undertake community capacity-building activities, which may include hosting community events, establishing a social committee, undertaking a social research project, developing a social inclusion framework, development an on-line community portal and/or promoting other community based activities. Details are to be provided in the Voluntary Planning Agreement.

Ecologically Sustainable Development (ESD)

16. The ESD memorandum prepared by Windtech Consultants Pty Ltd is to be incorporated into the detailed design for the future Project/Development Applications to enable compliance with State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 and State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development.

Aboriginal Heritage

17. Should Aboriginal objects and/or historic relics be encountered during works, all works are to cease in the vicinity of the find and an Aboriginal and/or historic archaeologist be contacted to assess the find.
18. Housing NSW is not to disturb the native gum trees located within the public open space in the centre of Vermont Crescent. Details of any required tree protection measures are to be provided with the construction certificate(s) for works within or in close proximity to these trees or for any works that could potentially impact on these trees (eg installation of mobile cranes, use of heavy vehicles or the like).

Drainage and Flooding

19. The Stormwater Management Plan prepared by Warren Smith and Partners and dated 4 February 2011 is to be implemented in the detailed stormwater design for individual stages and documented within the future Project/Development Applications.

Utilities

20. Utility services are to be upgraded during the appropriate phase of the project, taking into account the requirements of Sydney Water, Energy Australia, Jemena and other service providers.

Noise and Vibration

21. Upgraded single glazing with acoustic seals is to be provided as outlined in the following table:

Room Type	Glazing Thickness	Acoustic Seals
Bedrooms	6mm Float	Yes
Living Rooms	6mm Float	Yes
Wet Areas	4mm Float	No

22. The STC rating of the glazing fitted into openable frames and fixed into the building opening should not be lower than the values listed in the following table. Where nominated, this will require the use of acoustic seals around the full perimeter of openable frames and the frame will need to be sealed into the building opening using a flexible sealant. Mohair seals in windows and doors are not acceptable where acoustic seals are required.

Glazing Assembly	Acoustic Seals	Minimum STC of Installed Window
6mm Float	Yes	28
4mm Float	No	22

23. Work will be undertaken during normal construction hours:
- Between 7:00am and 6:00pm, Mondays to Fridays inclusive;
 - Between 7:00am and 4:00pm, Mondays to Fridays inclusive for vehicles over 8 tonne;
 - Between 7:00am and 4:00pm, Saturdays, if inaudible on residential premises and between 8:00am and 1:00pm, Saturdays, if audible on residential premises;
 - No work on Sundays and public holidays.
24. A noise management plan will be prepared including appropriate noise control measures to facilitate compliance with AS2436-1981, which could include:
- Selection of alternate appliance or process for piling - CFA/Bored piling will be utilised where practical to minimise impact driven piling and reduce noise levels at the receivers by up to 15dB(A).
 - Selection of alternate appliance or process for excavation - where practical, alternative quieter process will be utilised in order to limit noise emissions to receivers.
 - Provision of acoustic barrier - noise barriers or screens can be located either at the source or receiver. Barriers are to be constructed from materials which have a noise reduction performance which is approximately 10dB(A) greater than the maximum reduction provided by the barrier. Where the barrier obscures the line of sight, noise reduction of approximately 5 to 10 dB(A) will be achieved at the locator site.
 - Silencer devices - all main appliances will be fitted with silencing devices with either engine shrouding or special industrial silencers fitted to exhausts to enable noise reductions of 10–20 dB(A).
 - Material handling - material handling areas will be located away from residential receiver areas.
 - Treatment of specific equipment - it may be possible to specially modify a piece of equipment to dramatically reduce sound levels.
 - Establishment of site practices – eg fortnightly noise checks, regular scheduled meetings for a finite period, complaints handling procedures.

Waste

25. The waste management plan prepared by Dasco Australia Pty Ltd is to be implemented in the construction and operational phases of the future buildings.

Site Contamination and Geotechnical

26. A Phase 2 Environmental Assessment is to be undertaken prior to approval of the Project/Development Applications for individual stages.

27. The recommendations listed in the Geotechnical Assessment prepared by Jeffrey & Katauskas Pty Ltd are to be implemented in the construction phase of the future buildings.

Consultation

28. Ongoing community consultation will be held with residents and the local community during the detailed design phase, demolition and construction phases to provide additional information regarding the future dwelling types/designs, likely timing and duration of the project phases and the opportunities to provide additional social infrastructure by way of the VPA.

6 Summary and Conclusion

The proposed renewal of the existing social housing dwellings at Riverwood North is considered to be appropriate and entirely suitable for the site for the following reasons:

- The proposed development is permitted with consent in the 2(c4) Residential zone under the provisions of the Canterbury Planning Scheme Ordinance.
- The proposal is entirely consistent with State, metropolitan and subregional strategic planning policy.
- The proposed non-compliances with the planning controls are considered to be entirely appropriate and have been fully justified.
- The potential environmental impacts are either positive or able to be mitigated through the adoption of appropriate measures to minimise their potential impact.
- The proposed development will result in considerable social benefits through the provision of new social housing and housing that is affordable for the local community, as well as public domain improvements that benefit both existing and likely future residents and the local community.
- The proposed renewal will also result in economic benefits during both the construction and operational phases, including creation of additional employment and economic benefits arising from increased local spending.
- The issues raised by the stakeholders have been satisfactorily addressed by way of this report and the additional supporting documentation.

Overall, the proposed development is considered to be in the public interest as it will result in a number of significant benefits for existing and likely future residents, the local community and the wider population.

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