

## 14-18 Boondah Road, Warriewood

---

August 2010

Prepared for **Meriton Apartments Pty Ltd**



Major Project MP 09\_0162  
Preferred Project Report

**Architectus Group Pty Ltd**  
ABN 90 131 245 684  
Level 3 341 George Street  
Sydney NSW 2060  
Australia  
T 61 2 8252 8400  
F 61 2 8252 8600  
sydney@architectus.com.au  
www.architectus.com.au



## Contents

<b>Executive summary</b>	<b>1</b>
<b>1 Introduction</b>	<b>3</b>
1.1 Preliminary	3
1.2 Consultation	4
1.3 Consultant team	4
<b>2 Preferred Project</b>	<b>5</b>
2.1 Introduction	5
2.2 Overview	5
2.3 Civil infrastructure and architectural drawings	6
2.4 Numerical overview	8
2.5 Preferred Concept Plan	9
2.6 Stage 1 Preferred Project	21
<b>3 Response to submissions</b>	<b>28</b>
3.1 Introduction	28
3.2 Government agencies	28
3.3 Pittwater Council	53
3.4 Rob Stokes Pittwater MP	57
3.5 Public submissions	58
<b>4 Revised Statement of Commitments</b>	<b>87</b>
4.1 Environmental Management Measures	87
4.2 Vegetation management measures	89
4.3 Future applications	89
4.4 Construction management measures	89
4.5 Ecologically Sustainable Development	89
4.6 Waste management measures	89
4.7 Arboricultural measures	90
4.8 Geotechnical measures	90
4.9 Bushfire Protection Measures	90
<b>5 Conclusion</b>	<b>91</b>

### Quality Assurance

Reviewed by

.....  
**Murray Donaldson**

Associate  
Urban Design and Planning  
Architectus Sydney Pty Ltd

.....  
Date

This document is for discussion  
purposes only unless signed.

## Appendices

- A Department of Planning letter of 15 July 2010**
- B Stage 1 Preferred Project Architectural Drawings**  
Prepared by Meriton Apartments Pty Ltd
- C Preferred Concept Plan drawings**  
Prepared by Architectus Group Limited
- D Civil Infrastructure drawings**  
Prepared by AT&L Civil Engineers & Project Managers
- E Landscape Architectural Drawings**  
Prepared by Site Image Landscape Architects
- F Stormwater and Environmental Management Report**  
Prepared by Brown Consulting
- G Bushfire Assessment**  
Prepared by Planning for Bushfire Protection Pty Ltd
- H Daylighting Assessment**  
Prepared by Heggies
- I Traffic Impact Assessment, Traffic Management and Accessibility Plan**  
Prepared by Halcrow
- J Flora and Fauna Assessment**  
Prepared by Total Earth Care
- K BASIX Certificate**  
Prepared by Efficient Living
- L Section 94 Development Contributions Works-in-Kind Costs**  
Prepared by Harper Somers O'Sullivan
- M Government agencies submissions**
- N Photomontage**  
Prepared by Troy Design Media

The Environmental Site Assessment letter advice prepared by Benbow Environmental and full scale architectural and civil infrastructure drawings are submitted under separate cover.

## Figures

Figure 1. Preferred Concept Plan land use plan	9
Figure 2. Preferred Concept Plan building heights plan	11
Figure 3. Preferred Concept Plan street network plan	12
Figure 4. Preferred Concept Plan pedestrian footpath and cycleway network	13
Figure 5. Landscape Concept Plan	15
Figure 6. Overall site landscape plan	16
Figure 7. 9.00am June 21 (midwinter) shadow diagram	17
Figure 8. 12.00noon June 21 (midwinter) shadow diagram	18
Figure 9. 3.00pm June 21 (midwinter) shadow diagram	18
Figure 10. Staging plan	20
Figure 11. Artist's impression from Macpherson Street	22
Figure 12. Stage 1 Preferred Project Landscape Plan	23

## Tables

Table 1. Concept Plan drawings	6
Table 2. Civil Infrastructure Drawings	6
Table 3. Stage 1 Architectural drawings	7
Table 4. Numerical overview	8
Table 5. Preferred Concept Plan GFA	10
Table 6. Preferred Concept Plan unit mix	10
Table 7. Stage 1 Preferred Project unit mix	24
Table 8. Stage 1 Preferred Project building heights	24
Table 9. Car parking for Stage 1 Preferred Project	26
Table 10. Response to Department of Planning submission	29
Table 11. Response to NSW Transport and Infrastructure submission	39
Table 12. Response to DECCW submission	40
Table 13. Response to NSW Office of Water submission	44
Table 14. Response to Housing NSW submission	46
Table 15. Response to NSW Rural Fire	47
Table 16. Response to Sydney Water submission	49
Table 17. Response to Department of Education and Training submission	50
Table 18. Response to SRDAC submission	51
Table 19. Response to Pittwater Council submission	53
Table 20. Response to Rob Stokes Pittwater MP	57
Table 21. Summary of public submissions	58
Table 22. Car parking provision	67



## Executive summary

This Preferred Project Report is written on behalf of Meriton Apartments Pty Ltd in response to the submissions raised during the exhibition of Major Project MP\_09\_0162 for the proposed Concept Plan and Stage 1 Project Application at 14-18 Boondah Street, Warriewood.

The Environmental Assessment (dated March 2010) was submitted to the NSW Department of Planning and exhibited between 14 April 2010 and 15 June 2010. This report should be read in conjunction with the Environmental Assessment.

On the 15 July 2010, the Department of Planning wrote to Meriton Apartments Pty Ltd to provide copies of submissions received during the exhibition period and to request a Preferred Project Report (PPR) identifying how the issues raised in submissions have been addressed. The Department's letter requested a revised Statement of Commitments incorporating amendments in response to the submissions. The Department's letter also identified a number of concerns relating to environmental constraints, building layout and separation, future residential amenity and infrastructure and requested a response to these concerns. A copy of the Department of Planning letter of 15 July 2010 is appended at **Appendix A**.

In summary, the Proponent seeks consent for the proposed Concept Plan and Stage 1 Project Application, described as follows:

### **Preferred Concept Plan** comprising:

- a total of 16 residential apartment buildings of 3, 4, Part 4/Part 5 and 5 storeys in height;
- a total of 559 dwellings;
- a gymnasium and swimming pools;
- a childcare centre;
- an internal network of public and private roads;
- a combined cycleway and pedestrian pathway; and
- landscaping of private, communal and public open space and ecological rehabilitation works.

### **Stage 1 Preferred Project** comprising:

- demolition of existing dwellings and structures and removal of vegetation on the subject site;
- excavation, earthworks and flood mitigation works;
- construction of 7 residential apartment buildings ranging in height from 3 to 5 storeys providing a total of 295 dwelling units;
- basement parking for 471 cars comprising 429 resident car spaces and 42 visitor spaces;
- a gymnasium and swimming pools;
- a childcare centre;
- construction of an internal access road and connection with Macpherson Street and Boondah Road including utilities and services infrastructure within the road reserves for electricity, potable water, gas and telecommunications;
- landscape works to public, communal and private open space areas

associated with the Stage 1 development and ecological rehabilitation works to Fern Creek corridor and the vegetated buffer to the Warriewood Wetlands;

- bushfire management works including vegetation removal associated with the proposed Asset Protection Zone;
- a public pedestrian cycle way; and
- flood mitigation works including bulk earthworks to establish flood storage areas and bio-retention basins.

### **Key changes to the exhibited Environmental Assessment scheme**

The key changes to the exhibited Environmental Assessment Scheme in both the Concept Plan and the Stage 1 Project Application are as follows:

- reduction in the height of part of Building E and Building F and all of Building K from 5 storeys to 4 storeys in response to concerns about the building separate distances;
- reduction in the total number of dwellings from 600 to 559 including a reduction in the Stage 1 Project Application from 313 to 295 dwellings, in response to concerns about density, separation distances and solar access;
- amendments to the footprints of Buildings O and P to accommodate the relocated bio-retention basin B and in response to concerns about infrastructure works within the vegetation buffer;
- the deletion of the two shops and the retention of the child care centre at the corner of the new local road and Macpherson Street in response to concerns about permissibility and requirements for adequate setbacks to the western boundary, stormwater overland flow and the spatial requirements for the new local road;
- an increase in the number of basement parking spaces in the Stage 1 Project Application from 352 car spaces to 471 cars comprising 429 resident car spaces and 42 visitor spaces in response to concerns above providing sufficient car parking spaces;
- deletion of the following internal private roads:
  - between Buildings A/B/C and Buildings D/E in response to concerns about the adequacy of common open space and setbacks of buildings D/E from the private road and the amenity of ground level units in those buildings;
  - private road access to Building O in response to concerns about impacts on the Endangered Ecological Community fronting Boondah Road, vehicle access will remain at the south eastern side of Building P;
- Relocation and enlargement of bio-retention basin B from adjoining the new local road to adjoining Buildings O and P and amendments to the flood storage areas to account for additional flood storage requirements.
- Amendments to the design of communal open space between Buildings D/E and F/G in response to concerns about the utility of the space for active recreation and sunlight access.

The Preferred Concept Plan and Stage 1 Preferred Project incorporates the above changes to address the concerns raised in submissions received during the exhibition period.



## 1 Introduction

### 1.1 Preliminary

This Preferred Project Report is written on behalf of Meriton Apartments Pty Ltd in response to the submissions raised during the exhibition of Major Project MP\_09\_0162 for the proposed Concept Plan and Stage 1 Project Application at 14-18 Boondah Street, Warriewood.

The Environmental Assessment (dated March 2010) was submitted to the NSW Department of Planning and exhibited between 14 April 2010 and 15 June 2010. This report should be read in conjunction with the exhibited Environmental Assessment.

On the 15 July 2010, the Department of Planning wrote to Meriton Apartments Pty Ltd to provide copies of submissions received during the exhibition period and to request a Preferred Project Report (PPR) identifying how the issues raised in submissions have been addressed. The Department's letter requested a revised Statement of Commitments incorporating amendments in response to the submissions. The Department's letter also identified a number of concerns relating to environmental constraints, building layout and separation, future residential amenity and infrastructure and requested a response to these concerns. A copy of the Department of Planning letter of 15 July 2010 is appended at **Appendix A**.

This Preferred Project Report is structured as follows:

- **Section 2: Preferred Project**  
Describes the amendments made to the Concept Plan and Stage 1 Project Application in response to the issues raised in the submissions received during the exhibition period.
- **Section 3: Response to submissions**  
This Section outlines the Proponent's response to each issue raised in submissions from government agencies, Pittwater Council, the Local State Member of Parliament Rob Stocks MP and the public.
- **Section 4: Revised Statement of Commitments;**  
Provides an revised draft Statement of Commitments, that includes additional commitments for the environmental management of the site, during construction and operational phases of the development; and
- **Section 5: Conclusion**

This report should be read in conjunction with the plans, reports and documentation at **Appendices A - N**.

## 1.2 Consultation

Following conclusion of the exhibition period the Department of Planning provided copies of the submissions from the public and government agencies, Rob Stokes Pittwater MP and Pittwater Council.

The Department of Planning's letter requested that additional information be provided as well as additional justification to address key issues (refer to **Appendix A**).

Following receipt of the Department of Planning letter representatives from Meriton Apartments Pty Ltd, with their planning consultant Architectus Group Limited met with Planning Officers from the Department of Planning to discuss how Meriton proposed to address the issues raised in the submissions including changes to the exhibited Environmental Assessment proposal, as well as the issues raised by the Department of Planning and their request for additional information.

## 1.3 Consultant team

The following consultants were engaged to work on this project:

<b>Project Manager</b>	<i>Meriton Apartments Pty Ltd</i>
<b>Statutory Planning</b>	<i>Architectus Group Limited</i>
<b>Architecture (Stage 1)</b>	<i>Meriton Apartments Pty Ltd</i>
<b>Concept Plan and 3D Images</b>	<i>Architectus Group Limited and Meriton Apartments Pty Ltd</i>
<b>Landscape Architect</b>	<i>Site Image</i>
<b>Consultation Specialist</b>	<i>Elton Consulting</i>
<b>Quantity Surveyor</b>	<i>RPS, Harper Somers, O'Sullivan</i>
<b>Surveyor</b>	<i>JBW Surveyors</i>
<b>BASIX Consultant</b>	<i>Efficient Living Building Sustainability Consultants</i>
<b>Daylight Access Consultant</b>	<i>Heggies</i>
<b>Geotechnical Engineer</b>	<i>Jeffery and Katauskas Pty Ltd</i>
<b>Utilities and Services Engineer</b>	<i>Brown Consulting</i>
<b>Civil Engineer</b>	<i>Brown Consulting</i>
<b>Graphic Artist</b>	<i>Troy Bray Design Media</i>
<b>Hydraulic Engineers</b>	<i>Brown Consulting</i>
<b>Bushfire Consultant</b>	<i>Flamezone Pty Ltd &amp; Planning for Bushfire Protection</i>
<b>Traffic and Transport Consultant</b>	<i>Halcrow Transport and Traffic Planning Associates</i>
<b>Ecological Consultant</b>	<i>Total Earth Care</i>
<b>Climate Change and Sea level rise</b>	<i>Brown Consulting</i>
<b>Integrated Water Management</b>	<i>Brown Consulting</i>
<b>Erosion and Sediment Control</b>	<i>Brown Consulting</i>
<b>Heritage Consultant</b>	<i>Graham Brooks and Associates</i>
<b>Aboriginal Archaeological and Cultural Heritage Impact Assessment</b>	<i>Banksia Heritage and Archaeology</i>
<b>ESD</b>	<i>Cundall</i>
<b>Aboriculturalist</b>	<i>Tree and Landscape Consultants</i>
<b>Environmental Consultant</b>	<i>Benbow Environmental</i>
<b>Waste Management Consultant</b>	<i>Wastech Engineering</i>
<b>Civil Engineers</b>	<i>AT&amp;L Civil Engineers and Project Managers</i>

## 2 Preferred Project

### 2.1 Introduction

This Section of the report describes the Preferred Project for the Concept Plan and Stage 1 Major Project Application.

### 2.2 Overview

Amendments to both the Concept Plan and Stage 1 Project Application are described below:

**Preferred Concept Plan** comprising:

- a total of 16 residential apartment buildings of 3, 4, Part 4/Part 5 and 5 storeys in height,
- a total of 559 dwelling units,
- a gymnasium and swimming pools,
- a childcare centre; and
- an internal network of public and private roads;
- a combined cycleway and pedestrian pathway; and
- landscaping of private, communal and public open space and ecological rehabilitation works.

**Stage 1 Preferred Project** comprising:

- demolition of existing dwellings and structures and removal of vegetation on the subject site;
- excavation, earthworks and flood mitigation works;
- construction of 7 residential apartment buildings ranging in height from 3 to 5 storeys providing 295 dwelling units;
- basement parking for 471 cars comprising 429 resident car spaces and 42 visitor spaces;
- a gymnasium and swimming pools;
- construction of an internal access road and connection with Macpherson Street and Boondah Road including utilities and services infrastructure within the road reserves for electricity, potable water, gas and telecommunications;
- landscape works to public, communal and private open space areas associated with the Stage 1 development and ecological rehabilitation works to Fern Creek corridor and the vegetated buffer to the Warriewood Wetlands;
- bushfire management works including vegetation removal associated with the proposed Asset Protection Zone;
- a public pedestrian cycle way through the site; and
- flood mitigation works including bulk earthworks to establish flood storage areas and bio-retention basins.

## 2.3 Civil infrastructure and architectural drawings

This section of the report describes the civil infrastructure and architectural drawings for the Preferred Concept Plan and Stage 1 Preferred Project.

### Preferred Concept Plan drawings

**Table 1** lists the drawings for the Preferred Concept Plan prepared by Architectus Group Limited. Refer to **Appendix C**.

**Table 1. Concept Plan drawings**

Drawing number	Description	Revision
A000	Open Space and Ecology Diagram	B
A001	Vehicle Access and Street Network	B
A002	Pedestrian Footpath and Access Cycleway	B
A003	Land Use Diagram	B
A004	Building Heights Diagram	B

### Civil infrastructure drawings

**Table 2** lists the Civil Infrastructure drawings for the Preferred Concept Plan prepared by AT&L Civil Engineers and Project Managers. Refer to **Appendix D**.

**Table 2. Civil Infrastructure Drawings**

Drawing number	Description	Revision
C001	Cover Sheet	P1
C002	Notes and Legends	P1
C003	General Arrangement Plan	P4
C004	Typical Cross Sections Sheet 1	P2
C005	Typical Cross Sections Sheet 2	P1
C006	Typical Cross Sections Sheet 3	P1
C007	Typical Cross Sections Sheet 4	P2
C008	Roadworks Details Sheet 1	P1
C009	Roadworks Details Sheet 2	P1
C010	Roadworks and Stormwater Drainage Plan Sheet 1	P2
C011	Roadworks and Stormwater Drainage Plan Sheet 2	P2
C012	Roadworks and Stormwater Drainage Plan Sheet 3	P3
C013	Roadworks and Stormwater Drainage Plan Sheet 4	P2
C014	Roadworks and Stormwater Drainage Plan Sheet 5	P6
C015	Roadworks and Stormwater Drainage Plan Sheet 6	P4
C020	Road Longitudinal Sections Sheet 1	P1
C021	Road Longitudinal Sections Sheet 2	P1
C035	Pavement Layout Plan Sheet 1	P1
C036	Pavement Layout Plan Sheet 2	P1
C037	Pavement Layout Plan Sheet 3	P1
C038	Pavement Layout Plan Sheet 4	P1

### Stage 1 Preferred Project

**Table 3** lists the architectural drawings for the Stage 1 Preferred Project prepared by Meriton Apartments Pty Ltd.

**Table 3. Stage 1 Architectural drawings**

Drawing number	Description	Revision
DA00	Cover Sheet	B
DA01	Overall Site - Staging Plan	B
DA02	Site Plan	B
DA03	Car parking Plan - 1	A
DA04	Car parking Plan – 2	B
DA05	Podium Plan	B
DA06	Typical Floor Plan (Level 2)	B
DA07	Deep Planting	B
DA10	Street Elevations	B
DA11	Site Sections	B
DA20	Building A Plans & Elevations	B
DA21	Building B Plans & Elevations	B
DA22	Building C Plans & Elevations	B
DA23	Building D Plans & Elevations	B
DA24	Building E Plans & Elevations	B
DA25	Building F Plans & Elevations (Sheet 1)	B
DA26	Building F Plans & Elevations (Sheet 2)	B
DA28	Building G Plans & Elevations	B
DA30	Childcare-Pool Plans & Elevations	B
DA60	Shadows 21 <sup>st</sup> March	B
DA61	Shadows 21 <sup>st</sup> June	B
DA62	Shadows 21 <sup>st</sup> September	B
DA63	Shadows 21 <sup>st</sup> December	B
DA70	Typical Unit Plans	B
DA71	Cross Ventilation Podium	B
DA72	Cross Ventilation Level 1	B
DA73	Cross Ventilation Level 2	B
DA74	Cross Ventilation Level 3	B
DA75	Cross Ventilation Level 4	B
DA76	Cross Ventilation Roof	B

## 2.4 Numerical overview

**Table 4** provides a numerical overview of the Preferred Project as a comparison to the exhibited Environmental Assessment.

**Table 4. Numerical overview**

		Exhibited Environmental Assessment	Preferred Project
<b>Total site area</b>		81,180.0sqm	81,180.0sqm
<b>FSR</b>		0.65:1	0.69:1
<b>Gross Floor Area</b>	Stage 1	52,767.0m <sup>2</sup>	29,998.1m <sup>2</sup>
	Stage 2		26,738.5m <sup>2</sup>
<b>Retail (two tenancies)</b>		192m <sup>2</sup>	Deleted
<b>Childcare</b>	Internal	373m <sup>2</sup>	270m <sup>2</sup>
	External	370m <sup>2</sup>	270m <sup>2</sup>
<b>Car Parking (Stage 1)</b>		362	
Studio (1.0/unit)		13	4
1 bed (1.0/unit)		62	41
2 bed (1.5/unit)		221	350
3 bed (2.0/unit)		34	34
Visitor Spaces (1.0/7 units)		32	42
Total			471
<b>Bicycle (Stage 1) (0.1/unit)</b>		32	30
<b>Unit Mix (Stage 1)</b>		313	295
Studio		13 (4.2%)	4 (1.4%)
One Bed		62 (19.8%)	41 (13.9%)
Two bed (medium)		61 (19.5%)	65 (22.0%)
Two bed (large)		160 (51%)	168 (56.9%)
3 bed		17 (5.5%)	17 (5.8%)

## 2.5 Preferred Concept Plan

This section of the report describes the Preferred Concept Plan, having regard to the following elements:

- Land use
- Residential dwellings
- Building envelopes
- Traffic and street network
- Car Parking
- Pedestrian footpath and cycleway network
- Landscape, open space and riparian corridor
- Solar access

These elements of the Preferred Concept Plan are described below:

### Land use

The Preferred Concept Plan proposes multi-unit housing in 16 buildings and a child care centre. Public open space is proposed across the western and southern parts of the site. Private common private open space is proposed in association with the proposed residential buildings.

The two (2) neighbourhood shops that were proposed to be co-located with the child care centre in the exhibited Environmental Assessment scheme have been deleted from the Preferred Concept Plan.

**Figure 1** provides a plan of the proposed use for each building.



**Figure 1. Preferred Concept Plan land use plan**

## Density and Gross Floor Area

**Table 5** provides the Gross Floor Areas for the Stage 1 and Stage 2 of the Preferred Concept Plan.

**Table 5. Preferred Concept Plan GFA**

Building	Concept Plan Stage Gross Floor Area (m <sup>2</sup> )	
	Stage 1	Stage 2
Building A	1767.1	
Building B	1760.3	
Building C	1756.7	
Building D	5113.9	
Building E	4363.5	
Building F	9122.8	
Building G	5272.2	
Pool house	841.6	
Building H		1751.4
Building I		1750.5
Building J		1946.1
Building K		4208.4
Building L		3545.5
Building M		5260.5
Building N		1397.7
Building O		1958
Building P		4920
<b>Total</b>	<b>29,998.1</b>	<b>26,738.1</b>

## Residential dwellings

**Table 6** provides a schedule of the residential dwelling mix for both residential stages of the Concept Plan. The unit mix for the Stage 1 Project Application is provided. A total of 295 dwellings are proposed with a mix of 1, 2 and 3 bedroom units is proposed in Stage 1.

Also provided is an indicative unit mix for Stage 2 of the Concept Plan, which comprises a total of 264 dwellings. It is noted that the detailed architectural design for the Stage 2 Project Application do not form part of this combined Concept Plan and Stage 1 Project Application and the Stage 2 mix is indicative only.

**Table 6. Preferred Concept Plan unit mix**

Unit type	Number of units/(%)		
	Stage 1	Stage 2 (indicative)	Total
Studio	4 (1.4%)	30 (11%)	75 (13.4%)
1 bedroom unit	41 (13.9%)		
2 bedroom unit (medium)	65 (22.0%)	192 (73%)	425 (76%)
2 bedroom units (large)	168 (56.9%)		
3 bedroom unit	17 (5.8%)	42 (16%)	59 (10.6%)
<b>Total</b>	<b>295 (100%)</b>	<b>264 (100%)</b>	<b>559 (100%)</b>



### Building envelopes and height

In response to concerns raised in some of the submissions with the separation distances between some buildings in the exhibited Environmental Assessment scheme, including the Department of Planning, the height of Buildings E and F have been reduced from 5 storeys to Part 4 storeys and Part 5 storeys. The height of Buildings K and M has also been reduced from 5 storeys to 4 storeys.

**Figure 2** illustrates the proposed building heights in the Preferred Concept Plan.



**Figure 2. Preferred Concept Plan building heights plan**

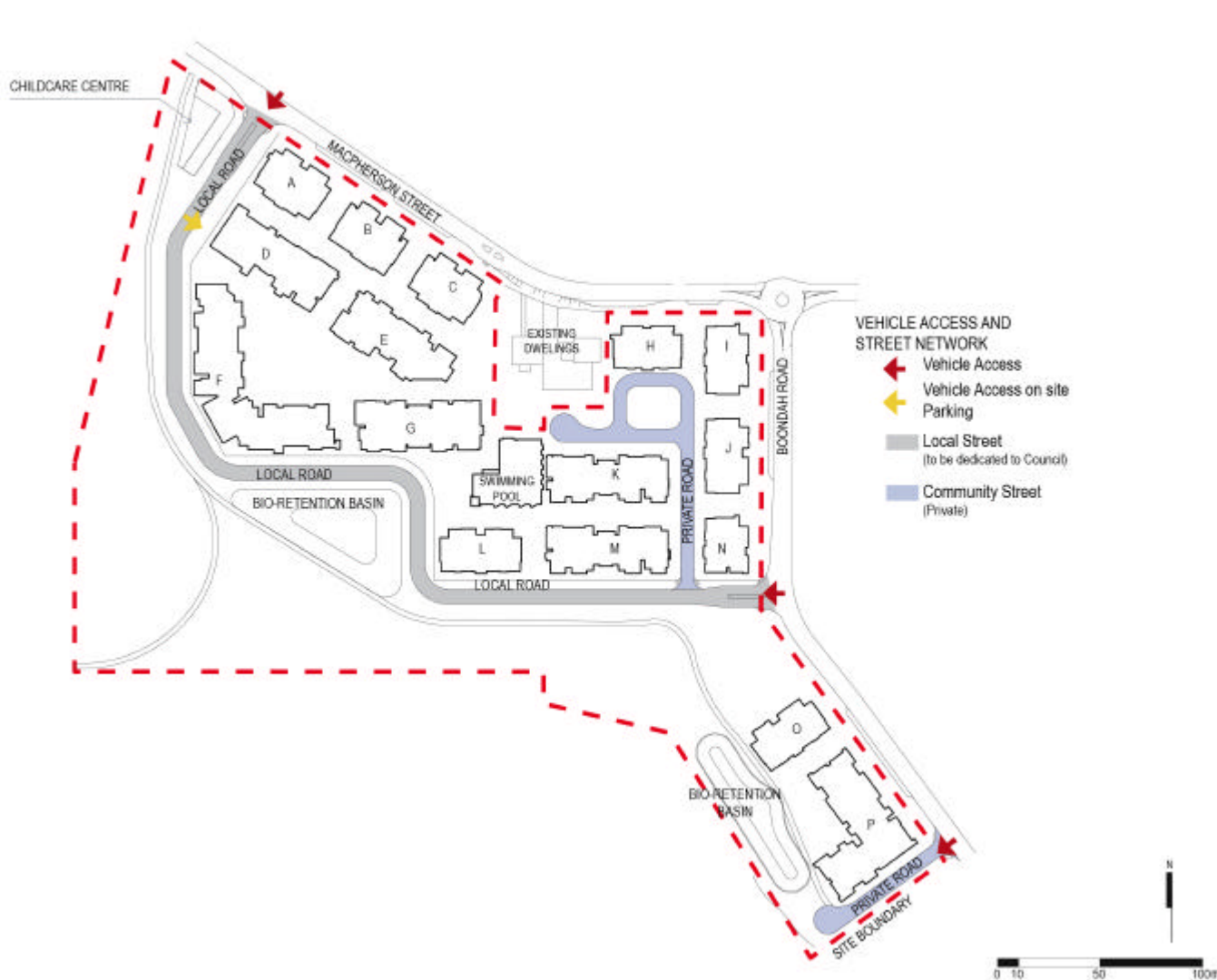
### Vehicle access and street network

The street network of the exhibited Environmental Assessment scheme has been reviewed in light of concerns about traffic generation from the development and the amenity of ground level dwellings in Buildings D and E with minimal setbacks fronting onto the internal private road.

These concerns have been addressed by removing the internal private road between Buildings A/B/C and Buildings D/E. The space between those buildings is proposed as a common landscaped area with pedestrian access to the buildings fronting the space.

The private road to Building O and P has been moved to the south eastern side of Building P.

**Figure 3** illustrates the revised vehicle access and street network in the Preferred Concept Plan.



**Figure 3. Preferred Concept Plan street network plan**

### Pedestrian footpath and cycleway network

The location for the shared pedestrian footpath and cycleway, to be dedicated to Council has been amended in response to amendments to the landscape design, stormwater and flood mitigation and management works.

**Figure 4** illustrates the revised pedestrian access and cycleway network in the Preferred Concept Plan.



**Figure 4. Preferred Concept Plan pedestrian footpath and cycleway network**

### **Landscape, open space and riparian corridor**

This sub-section of the report describes the proposed amendments to the landscape design and ecological rehabilitation works in the exhibited Environmental assessment scheme in response to submissions. Specific issues raised in submissions are addressed in **Section 3** of this report. In relation to the ecological rehabilitation works to the Fern Street corridor and riparian zone and landscape buffer to the Warriewood Wetlands, the landscape design and ecological rehabilitation approach has been to adopt same approach as approved by Pittwater Council for Development Application DA526/08 on 20 July 2009.

The proposed changes design approach for the landscape and ecological rehabilitation works for the Preferred Concept Plan are summarised as follows:

#### ***The Public Riparian Zone***

The Public Riparian Zone is 50 metres and consists of an inner 25 metre-wide “multi function corridor” located on either side of Fern Creek. This buffer is required under the P21 DCP Section C6.7 and will be protected and managed in accordance with the specification of the DCP 21. This 50 metre wide multi function corridor is to be dedicated to public ownership under Council control. Rehabilitation works within this area will be carried out by Council and will involve substantial reconstruction of the creek profile, the construction of new creek banks and possibly re-alignment of the creek. Weed infestations and exotic trees will be removed and erosion controls installed. The retention of native trees within this Zone (Swamp Oak) and additional indigenous plant stock are proposed along the riparian creek.

#### ***Private Buffer Strip***

The 25 metre wide Private Buffer Strip will directly adjoin the Public Riparian Zone and it will remain in private ownership. This buffer strip will rehabilitated and will contain open space areas, landscaped gardens and a shared pedestrian bicycle path.

#### ***Core Riparian Zone (CRZ)***

The CRZ comprises a 20 metre wide vegetated buffer along the southern boundary of the site, as requested by Pittwater Council in the previous DA approval. Rehabilitation in this zone will largely comprise removal of environmental and noxious weeds currently occurring in high densities in places. The removal of weeds will allow for the regeneration of native species.

#### ***10m buffer zone***

The 10 metre wide buffer zone will be established along the southern boundary of the site, to directly adjoin the CRZ to the north. This buffer is to protect the boundary of the Warriewood Wetland and is referred to under the DCP 21 Section B4.14. This buffer was negotiated between Council and DECCW in 2003 and is to be maintained in the current proposal.

### Asset Protection Zone

The APZ will be established along the southern boundary of the site which will comprise the 10 metre buffer zone and an additional 15 metre inner protection zone. This is a requirement of the Rural Fire Service as the site has been identified as bush fire prone land. Vegetation will mainly consist of managed grasses with tree capacity of no greater than 15% cover.

**Figure 5** Illustrates the Landscape Plan for the Preferred Concept Plan.



**Figure 5. Landscape Concept Plan**



**Figure 6. Overall site landscape plan**  
(Source: Site Image Landscape Architects)



### Solar access

The shadow diagrams submitted with the exhibited Environmental Assessment for the Concept Plan have been revised showing the overshadowing impact of buildings in the Preferred Concept Plan.

**Appendix C** provides shadow diagrams for the Preferred Concept Plan at 21 March, 21 June, 21 September and 21 December.

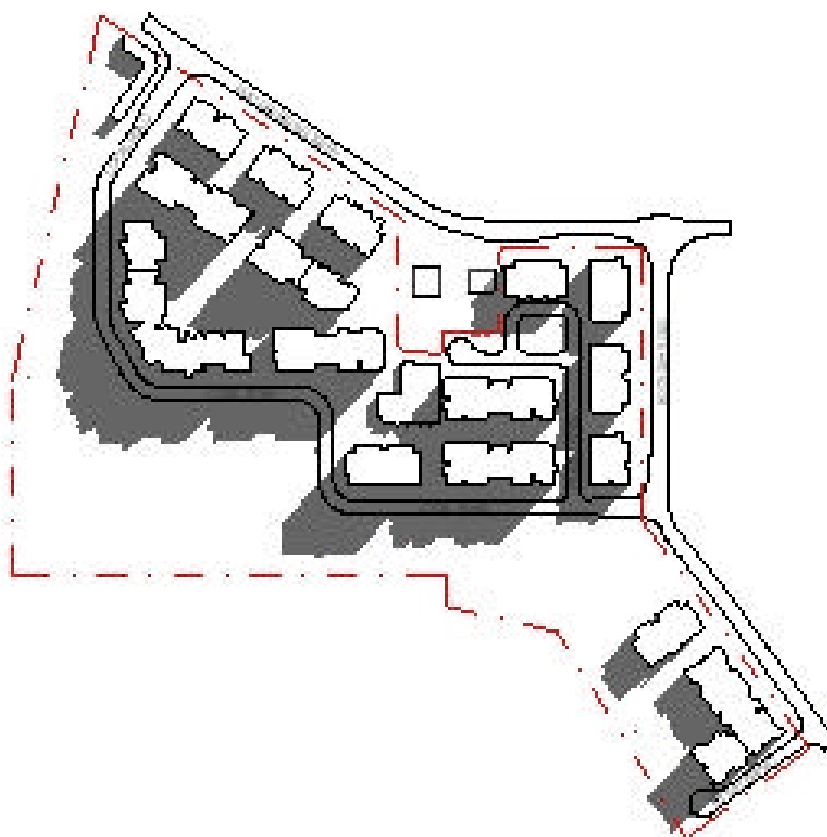


Figure 7. 9.00am June 21 (midwinter) shadow diagram



Figure 8. 12.00noon June 21 (midwinter) shadow diagram

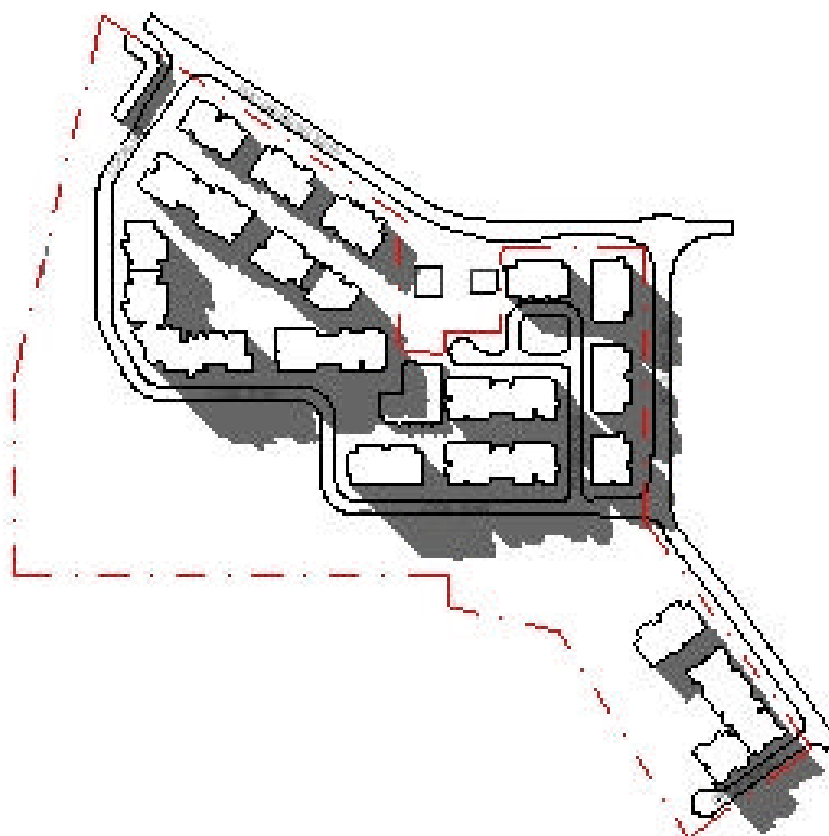


Figure 9. 3.00pm June 21 (midwinter) shadow diagram



## Staging

This section of the Preferred Project Report outlines the proposed staging of construction and environmental management works for the proposed development. A staging plan is provided at **Appendix B**.

The following stages of development are proposed:

### Stage 1

- Construction of 7 residential flat buildings comprises a total of 295 dwellings with basement car parking for 471 vehicles;
- Construction of local through road including drainage, provision of electricity, potable water, street lighting and street trees;
- Construction of the following intersection works:
  - Roundabout at the intersection of the new local road and Macpherson Street;
  - Roundabout at the intersection of the new local road and Boondah Road; and
  - Roundabout at the intersection of Macpherson Street and Boondah Road.
- Reconstruction works of the southern side of Macpherson Street including footpath fronting the Stage 2 area;
- Construction of child care centre;
- Construction of common gymnasium and swimming pool
- Construction of the western part combined cycleway and pedestrian pathway;
- Vegetation removal;
- Stormwater and flooding mitigation works including excavation and filling to create additional flood storage areas, overland flow paths and bio-retention basin A;
- Environmental rehabilitation works including Fern Creek restoration works, riparian planting, and weed eradication;

### Stage 2

- Construction of 9 residential flat buildings comprising a total of 264 dwellings (indicative number of units);
- Construction of private vehicle roads to access to basement car parking road including drainage, provision of electricity, potable water, street lighting and street trees. The number of car spaces is to be determined in the future project application;
- Stormwater management works including the construction of bio-retention basin B;
- Construction of the eastern part of the combined cycleway and pathway;
- Reconstruction works of the eastern side of Bonndah Road including footpath fronting the Stage 2 area

**Figure 10** illustrates the staging of development.

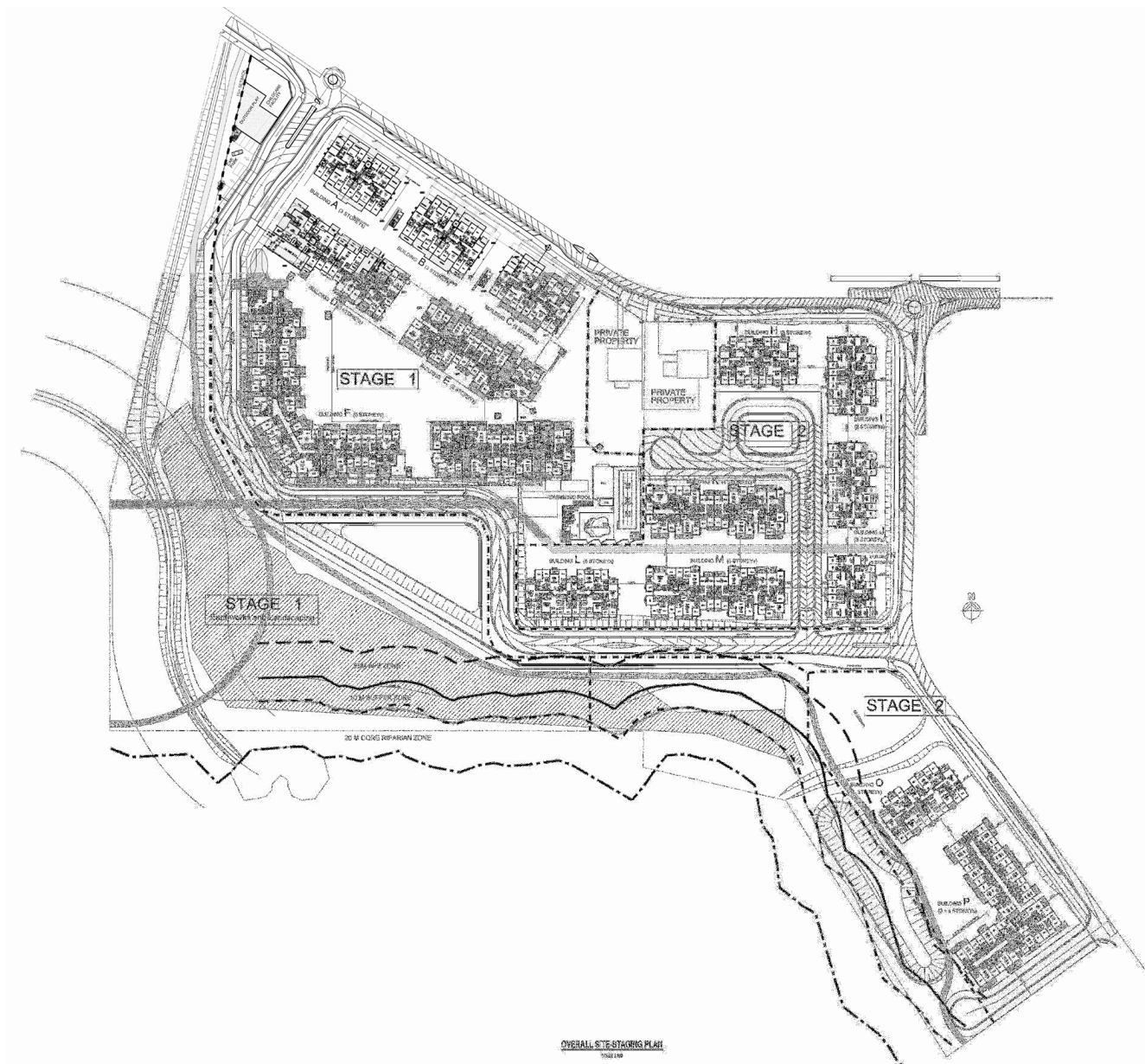


Figure 10. Staging plan

## 2.6 Stage 1 Preferred Project

This section of the report describes the Stage 1 Preferred Project, having regard to the following elements:

- Land use
- Landscape design and ecological rehabilitation
- Residential density and Gross Floor Area
- Residential unit mix
- Building height
- Setbacks
- Vehicular access, traffic and transport
- Car Parking
- Pedestrian Access
- Stormwater Management
- Bushfire Management

These elements of the Stage 1 Preferred Project are described below:

### Land uses

The Stage 1 Preferred Project includes the following land uses:

- Multi unit residential;
- Childcare centre;
- Private communal open space; and
- Public open space.

The above uses proposed in the Stage 1 Preferred Project area described below in terms of the amendments following the exhibition of the Environmental Assessment scheme:

#### ***Multi unit residential***

The number of multi-unit residential buildings is proposed to remain unchanged. Amendments to building envelopes in terms of the number of storeys has resulted in a reduction to the number of storeys in Buildings E and F and changes to the unit mix from 313 to 295. As a result of these changes the number of units has been reduced. The residential density, gross floor area and residential unit mix is described in the following sub-sections of this report.

#### ***Childcare centre***

The child care centre, located at the corner of Macpherson Street and the new local road was previously co-located with two (2) neighbourhood shops. The Preferred Project has retained the child care centre with an internal area of 270m<sup>2</sup> and external area of 270m<sup>2</sup>. The neighbourhood shops have been removed in the Preferred Project. Refer to **Figure 11**.

#### ***Private communal open space***

Changes to the design of the private common open space are proposed in response to concerns from the NSW Department of Planning of Planning, Council and some members of the public about the utility of the private communal open space proposed in the exhibited Environmental Assessment scheme.

**Figure 12** illustrates the landscape plan for the Stage 1 Preferred Project

including private communal open space. The changes to the design of the private communal open space are described in the following sub-sections of this report.

### ***Public open space***

Changes to the design of the public open space are proposed in response to concerned from the NSW Department of Planning of Planning, Council and some members of the public about environmental characteristics of the public open space proposed in the exhibited Environmental Assessment scheme.

**Figure 12** illustrates the landscape plan for the Stage 1 Preferred Project including public open space. The changes to the design of the public open space are described in the following sub-sections of this report.



**Figure 11. Artist's impression from Macpherson Street**



### Landscape design and ecological rehabilitation

The previous section of the report describes the proposed amendments to the landscape design and ecological rehabilitation works of the exhibited Environmental assessment scheme in response to submissions for the Preferred Concept Plan. Specific issues raised in submissions are addressed in **Section 3** of this report.

**Figure 12** Illustrates the Landscape Plan for the Stage 1 Preferred Project cropped to show the common and private landscaping in more detail.



**Figure 12. Stage 1 Preferred Project Landscape Plan**

### Residential density and Gross Floor Area

The Stage 1 Preferred Project has a total Gross Floor Area of 29,998.1m<sup>2</sup>. The building-by-building breakdown of Gross Floor Area for the Stage 1 Project Application is provided in **Table 5**.

### Residential unit mix

Amendments to the proposed number of storeys in Buildings E and F from 5 storeys in the exhibited Environmental Assessment scheme to part 4 storeys and part 5 storeys in the Preferred Project scheme and changes in the proposed unit mix a reduction in the total number of dwellings is proposed from the exhibited Environmental Assessment scheme of 313 to 295. **Table 7** provides a schedule of the unit mix for the Stage 1 Preferred Project.

**Table 7. Stage 1 Preferred Project unit mix**

Unit type	Number of units/(percent)
Studio	4 (1.4%)
1 bedroom unit	41(13.9%)
2 bedroom unit (medium)	65 (22.0%)
2 bedroom units (large)	168 (56.9%)
3 bedroom unit	17 (5.8%)
<b>Total</b>	<b>295 (100%)</b>

### Building height

**Table 8** provides a comparison between the building heights proposed in the exhibited Environmental Assessment scheme and the Preferred Project for the Stage 1 development.

**Table 8. Stage 1 Preferred Project building heights**

Building	Exhibited Environmental Assessment scheme (storeys)	Preferred Project scheme (storeys)
<b>A</b>	3	3
<b>B</b>	3	3
<b>C</b>	3	3
<b>D</b>	5	5
<b>E</b>	5	Part 4 & Part 5
<b>F</b>	5	Part 4 & Part 5

### Setbacks

The development proposes a 6.5 metre setback to Macpherson Street and Boondah Road, which complies with Council's setback controls as stipulated in the Pittwater DCP 21.

Both Macpherson Street and Boondah Road frontage is proposed to be landscaped with indigenous tree species. This will help to create filtered views both into and out of the site between the residential buildings and soften and break up the scale of the development.

### **Vehicular access, traffic and transport**

Vehicular access for the Stage 1 Preferred Project is proposed to be via both Boondah Road and Macpherson Street. Internally the main access connection between Macpherson Street with Boondah Road is proposed via a new public local road with all other internal access ways under private ownership. This new local road is proposed to be built and dedicated to Council in Stage 1 of the development.

Collectively, these access routes would provide for direct access to car parking areas, internal circulation, emergency vehicle access, access for service vehicles (garbage and remobilizes) and on-street parking.

The Preferred Concept Plan development of 559 dwellings and the child care centre is expected to generate 280 vehicle trips per hour during the weekday morning peak hour and 276 vehicle trips per hour during the weekday evening peak hour.

This is compared to the approved development and previous planning for Warriewood Valley that assumed this site would generate 95 vehicle trips per hour. The proposal thus increases the peak hour traffic generation of the site by some 220 and 216 vehicle trips per hour during the morning and evening peak hours respectively above that of the approved development and as used in previous planning for the Warriewood Valley road system.

The proposed new local road is designed in accordance with the Warriewood Valley Roads Master Plan (2006 review) to accommodate the additional traffic generated by the proposed development.

Other public road infrastructure upgrades as a result of the proposed development, proposed by the Proponent are as follows:

- New roundabout at the Intersection of the Macpherson Road and the new local road accessing the site;
- New roundabout at the Intersection of the Macpherson Road and the new local road accessing the site;
- New roundabout at the intersection of Macpherson Street and Boondah Road.

**Section 3** of this report addresses the Section 94 Developer Contributions proposal by the Proponent. This section describes proposed works-in-kind sought by the Proponent that seek to offset monetary contributions.

Planned infrastructure upgrades in Warriewood Valley include bus bays and pedestrian refuges in the vicinity of the subject site, as well as providing cycle lanes on the sub arterial streets and shared pathways as per the cycle plan. These measures are expected to result in good linkages within Warriewood Valley for pedestrians and cyclists and good access to the bus services.

Sydney Buses proposes to review bus service levels as a result of the proposed development and increased residential density and population which may result in increased frequency of service.

## Car parking

A report on the provision of car parking and car parking access arrangements for the exhibited Environmental Assessment scheme for the Stage 1 development was undertaken by Transport and Traffic Planning Associates and is provided at **Appendix I**.

**Table 9** provides a comparison of car parking provided in the exhibited Environmental Assessment scheme and the Stage 1 Preferred Project.

The proposed car parking provision for the Stage 1 Preferred Project is planned with the following parking rates:

- Studio and 1 bedroom unit = 1 space
- Two bedroom unit = 1.5 space
- Three bedroom unit = 2 spaces
- Visitors = 1 space per 7 apartments

The proposed car parking provision is not compliant with Pittwater Council DCP parking requirements for residential developments, which requires 2 spaces for a two bedroom unit; however the proposed provision of 1.5 spaces per 2 bedroom unit is an appropriate balance between the submission of Pittwater Council and that of the NSW Infrastructure and Transport.

Pittwater Council requested compliance with the Pittwater DCP 21 residential car parking rates as follows:

- Studio and 1 bedroom units - 1 space
- Two bedroom units - 2 spaces
- Three bedroom units - 2 spaces
- Visitors - 1 space per 4 units

Applying Council's parking rates to the Preferred Project will require a total of 619 car spaces including 74 visitor car spaces.

The NSW Transport and Infrastructure requested compliance with the RTA resident car parking rates for 1 and 3 bedrooms units as follows:

- One bed unit - 0.6 spaces
- Three bed unit - 1.4 spaces

Applying the RTA rates to the proposed 1 and 3 bedroom units (as recommended by the RTA) and the proposed rates for 2 bedroom units and visitor parking will result in a total of 431 car spaces including the proposal of 42 visitor car spaces.

**Table 9. Car parking for Stage 1 Preferred Project**

Unit mix	Exhibited Environmental Assessment	Preferred Project
Studio	13	4
1	67	41
2	216	350
3	34	34
Visitor	32	42
<b>Total</b>	<b>352</b>	<b>471</b>



### Stormwater management

Revised stormwater drainage concept plans for the Stage 1 Preferred Project by AT&L Consulting Engineers are provided at **Appendix D**. A revised Stormwater and Environmental Management report has been prepared by Brown Consulting and is provided at **Appendix F**.

### Pedestrian access

Pedestrian, pathway and cycle network is proposed in the Concept Plan and Stage 1 development works (refer to landscape plans for this Preferred Project at **Appendix E**).

A combined cycleway and pathway proposes to link with similar paths on adjoining land in accordance with the Pittwater DCP 21 and Warriewood Valley Landscape Design Guidelines 2004. Elevated timber boardwalks are to provide access over the reconstructed Fern Street and overland flow paths.

### Bushfire management

Flamezone bushfire consultants provided a Bushfire Risk Assessment report for Development Consent DA526/08. A letter from Flamezone was provided with an updated assessment of the exhibited Environmental Assessment scheme.

The report outlined Bushfire Protection Measures to the dwellings, which are positioned away from the wetlands and interface vegetation/buffer zones. The road system provides safe access and egress for Fire Services and residents.

Specifically, the Flamezone report stated that:

*“From a Bushfire Risk Assessment point of view it appears that the new plans for the Boondah Road site only change the building styles and leave the approved Bushfire Protection Measures, outlined in the original report, in place. These measures are outlined in the assessment (September 2008) under sections 4.1, 4.2, & 4.3. Thus the current approval by council and the RFS will be valid”.*

In response to a request from the NSW Department of Planning an updated Bushfire Assessment of the Preferred Project is provided by Planning for Bushfire Projection Pty Ltd. A copy of the letter report is provided at **Appendix G**.

Specifically, the updated bushfire assessment of the Preferred Project states that the proposed asset protection zones are appropriate for the proposed increase in residential density and child care centre use.

### 3 Response to submissions

#### 3.1 Introduction

The project team of specialist consultants have assisted in preparing responses to the key issues raised in submissions. Relevant specialist studies and documentation prepared for the exhibited Environmental Assessment have been reviewed and updated to reflect the Preferred Project and some have prepared responses where technical merit was warranted including: flooding and stormwater management, flora and fauna, and traffic and transport.

A summary response to each of the key issues raised in public submissions on the exhibited Environmental Assessment is provided in the following sub-sections of this report. The response to the issues is provided in the order of significance in terms of the number of times the issues were raised in submissions.

#### 3.2 Government agencies

The following government agencies were referred the Environmental Assessment by the Department of Planning and provided submissions on the exhibited Environmental Assessment:

- Department of Planning;
- NSW Transport & Infrastructure;
- Department of Environment, Climate Change and Water;
- NSW Office of Water;
- NSW Rural Fire Service;
- Housing NSW;
- Sydney Water;
- Department of Education and Training; and
- Roads and Traffic Authority / Sydney Regional Development Advisory Committee.

Detailed responses to each issue raised by the government agencies that made submissions to the exhibited Environmental Assessment are provided as follows:

#### **Department of Planning**

On the 15 July 2010, the Department of Planning wrote to Meriton Apartments Pty Ltd to provide copies of submissions received during the exhibition period and to request a Preferred Project Report (PPR) prepared identifying how the issues raised in submissions have been addressed.

The Department's letter requested a revised Statement of Commitments incorporating amenity amendments following the response to the submissions. The Department's letter also identified a number of key issues relating to environmental constraints, building layout and separation, future residential amenity and infrastructure, and requested additional information.

Refer to Department of Planning's letter of 15 July 2010 at **Appendix A**.

Table 10. Response to Department of Planning submission

Issue raised by DoP	Response
<b>Schedule 1 Department of Planning Key issues</b>	
<b>1. Environmental constraints and future development area</b>	
<ul style="list-style-type: none"> <li>Review and further analysis of capacity of site having regard to Office of Water and DECCW submissions.</li> </ul>	Refer to response to the issues raised by DECCW and the NSW Office of Water below.
<ul style="list-style-type: none"> <li>Address inconsistencies regarding width of riparian land including Creek Riparian Zone, and land uses within these zones and inconsistencies in the flora and fauna report submitted with EA.</li> </ul>	The inconsistencies between reports submitted with the exhibited Environmental Assessment have been corrected in this Preferred Project Report. Essentially, the width of the riparian land including the CPZ is consistent with the Pittwater Council approval of DA526/08.
<ul style="list-style-type: none"> <li>Outcome of analysis may require some reduction in developable area.</li> </ul>	Revised Concept Plans and Stage 1 Project Application architectural drawings have been prepared. The plans have adjusted the building footprints to accommodate additional flood storage. Excavation for flood storage is generally outside the riparian zone, with minor excavation works required that the northern edge of the vegetation buffer.
<b>2. Building layout, separation, future residential amenity and open space</b>	
<ul style="list-style-type: none"> <li>Further assessment of building layout, building separation, overshadowing, provision of open space and resultant impacts on future residential amenity of the proposal is required to justify the proposed density is required and some reduction in scale may be required.</li> </ul>	<p>Building separation is dependent on the height of the buildings and the type of rooms in opposing units. Building height has been amended to ensure compliance with the NSW RFDC 2002 minimum separation distances.</p> <p>Building layout has been amended in the case of Buildings O &amp; P in response to concerns about impact on the Endangered Ecological Community and riparian corridor and the need for additional flood storage.</p> <p>Concerns with overshadowing and solar access have been addressed by reconfiguring apartments, as well as reducing the heights of buildings E&amp;F and K&amp;M. The proposed Stage 1 Preferred Project complies with the NSW Residential Flat Design Code 2002 Rules of Thumb for daylight access to living rooms and primary open space of units. A total of 70.1% of units will received a minimum of 3 hours of direct sunlight between 9am and 3pm during midwinter.</p> <p>The open space provided on site with the exhibited Environmental Assessment scheme has been redesigned to provide the following additional activities:</p> <ul style="list-style-type: none"> <li>Children's play area at the main entry to the swimming pool centre in the Stage 1;</li> <li>Fitness and exercise area in the pocket park in the Stage 2; and</li> <li>Additional level lawn of 900m2 added to the Central Park in Stage 1.</li> </ul> <p>It is considered the additional activities will cater to the demand for usable and active open space on site.</p> <p>It is noted that Council's approval of DA526/08 did not provide for these open space amenities.</p> <p>In responding to the issues raised in submissions, the density of the development has been reduced from 600 dwellings to 559.</p>

Issue raised by DoP	Response
<ul style="list-style-type: none"> <li>Design and layout of 5 storey buildings (D, E F &amp; G) in Stage 1 and K &amp; M in the Concept Plan (Stage 2) should be reduced in terms of: <ul style="list-style-type: none"> <li>Building separation,</li> <li>Solar access for apartments and open space),</li> <li>Amenity to future residents</li> </ul> </li> <li>Amended design is to comply with the RFDC in terms of separation distance and solar access calculated for each building.</li> <li>Concept Plan should demonstrate building envelopes can achieve solar access guidelines under RFDC.</li> </ul>	<p>The heights of parts of Buildings E and F have been reduced from 5 storeys to 4 storeys. As such the separation distances are compliant with the NSW Residential Flat Design Code 2002.</p> <p>Solar access calculations to units have been prepared by the consultants Heggies. The Preferred Project Report achieved 3 hours of sunlight between 9am and 3pm at 21 June (midwinter) to 70.1% of the proposed units. This meets the minimum 70% rule of thumb of the NSW Residential Flat Design Code 2002 Rule of Thumb.</p> <p>The RFDC does not contain any minimum standards for sunlight access to common open space. The Better Design Principles for daylight access of the RFDC includes the provision to <i>“ensure direct access to communal open space between March and September and provide appropriate shading in summer”</i>.</p> <p>In relation to the better design practice principles for open space, the RFDC suggests to <i>“locate open space to increase the potential for residential amenity by designing apartment buildings which:</i></p> <ul style="list-style-type: none"> <li><i>Are sited to allow for landscape design,</i></li> <li><i>Are sited to optimise daylight access in winter and shade in summer.</i></li> <li><i>Have a pleasant outlook</i></li> <li><i>Have increased visual privacy between apartments”</i>.</li> </ul> <p>The central open space is approximately 80 metres at its longest and 50m at its widest. The preferred project includes a revised design for the triangular common open space with increased areas of usable open lawn for children's play. An area of 900m<sup>2</sup> is proposed as an open lawn allowing children enough space to kick and all and run around.</p> <p>A large proportion of the central space received direct sunlight during midwinter.</p>
<ul style="list-style-type: none"> <li>Shape and proportions of the triangular open space requires redesign to improve utility and size and reduce impact of overshadowing.</li> </ul>	<p>The Preferred Project includes an amended design for the triangular open space at the centre of the Stage 1 development.</p> <p>The triangular open space has large areas of usable open lawn area for children's' plan, which will be surveyed by surrounding buildings. The revised design includes an open lawn space of 900m<sup>2</sup>. Areas within the space are provided for parents to watch over children's safe play. Play equipment for children is included outside the main entry to the swimming pool.</p> <p>The open space is sited to provide private communal recreation opportunities for residents and their visitors. The space has open connections to surrounding streets and linkages to other public and common private open spaces on the site.</p> <p>While the space tapers from west to east, the open space linkages to surrounding will allow residents to connect to other larger open space areas in the vicinity of the site via the proposed combined cycleway and pathway.</p>

Issue raised by DoP	Response
	The amended design provides larger areas of lawn, by removing some of the larger trees to create open lawn spaces for children to kick a ball or partake in other active recreational pursuits.
<ul style="list-style-type: none"> <li>Proposed amendments may involve amendments to the proposed footprints, layout and height of buildings D, E, F &amp; G.</li> <li>May involve options for redistribution of floor space to other parts of the site.</li> </ul>	<p>The height of Buildings E &amp; F has been reduced from 5 storeys in the exhibited Environmental Assessment scheme to part 4 storeys. The building separation distances between the 4 storey and 5 storeys buildings are compliant with the recommended building separation distances of the NSSW RFDC 20002.</p> <p>Some of the unit layouts have been reconfigured to minimise potential undesirable overlooking opportunities between opposing habitable rooms and to improve sunlight access.</p>
<b>3. Traffic generation and road capacity</b>	
<ul style="list-style-type: none"> <li>Further consideration required on the capacity of the local road network and intersections to accommodate additional traffic from increased density.</li> </ul>	<p>Halcrow, Consultant Transport and Traffic Engineers and Planners and authors of the Warriewood Valley Roads Master Plan advised the development of the proposed 600 units compared with the approved 135 dwellings at the Environmental Assessment stage will have a:</p> <p><i>“very low impact on the operating conditions of the key intersections. No additional upgrades to the intersections would be warranted by the additional traffic expected to be generated by the proposed development.</i></p> <p><i>The planned upgrades to the intersections would satisfactorily accommodate the peak hour traffic”.</i></p> <p>The Preferred Project has reduced the number of proposed dwellings from 600 to 559. The traffic generation potential of the Preferred Project has been considered by Halcrow in the Traffic and Transport Assessment Report at <b>Appendix I</b>.</p> <p>This report concludes that:</p> <p><i>“The proposed development is expected to generate around 315 and 311 vehicle trips per hour during the morning and evening peak hours respectively”.</i></p> <p>The results of the SIDRA intersection analysis shows:</p> <p><i>“that the additional traffic generated by the proposed development would only have a minor impact on the operating conditions of the key intersections. The average delays experienced by drivers would increase only marginally at the surveyed key intersections, with most increasing by less than one second per vehicle.</i></p> <p><i>No additional upgrades at the intersections would be warranted by the additional traffic expected to be generated by the proposed development”.</i></p>
<ul style="list-style-type: none"> <li>Internal local road should be reviewed in terms of size and capacity. (Refer to comments from Council, RTA and Warriewood Valley Roads Master Plan 2006).</li> </ul>	<p>Transport and Traffic Planning Associates advise the internal road to be dedicated to Council has the function of a local road. The proposal is compliant with the design standard and the geometry is suitable for the proposed level of traffic using the internal local road.</p> <p>The proposed local road reserve width is 13.5m excluding a grassed verge with varying width on the southern side of the road. The grassed verge will be merged with the landscaping of the open space at the southern side of the site. The Rhodes Master Plan road section illustrates an indicative arrangement of private development on both sides of the road. In the</p>

Issue raised by DoP	Response
	<p>proposed situation, only one side of the entry road for the majority of its length has buildings fronting it.</p> <p>The Preferred Project has reduced the proposed number of dwellings from 600 to 559. Halcrow have reviewed the function of the internal through road to be dedicated to Council and advise that the findings of their original report remains valid. The design of the road is sufficient capacity to accommodate the traffic generation potential of the Preferred Project.</p> <p>The Halcrow report states that:</p> <p><i>“The future public road through the site is proposed to be designed as a local street in accordance with the Warriewood Roads Master Plan 2006 Review, which sets out road cross section guidelines as follows for local streets:</i></p> <ul style="list-style-type: none"> <li><i>• Minimum one traffic lane</i></li> <li><i>• Parking allowed either side of carriageway, vehicle passing intermittent</i></li> <li><i>• Minimum 1.0m to be maintained between carriageway and footpaths</i></li> </ul> <p><i>The Master Plan nominates that local streets carry an approximate upper limit of 2,000 vehicles per day, with a design speed of 40km/hr and speed limit of 50km/hr, and have a total carriageway width of 7.5m to cater for traffic, parking and cyclists. Cycles share the carriageway with vehicles, parking is adjacent to the kerb with no marked parking lane. A 1.5m wide footpath which may also be shared with cycles is required on at least one side of the carriageway. The total road reserve is required to be a minimum of 16.0m wide.</i></p> <p><i>The proposed future public road is expected to carry up to 185 vehicles per hour (during the morning peak at the Macpherson Street access, refer Figure 4) which is equivalent to approximately 1,850 vehicles per day. Within the site, the volume at any point on the internal road would be less than this. This volume is consistent with the Master Plan’s guidelines for local streets, thus adoption of the street design guidelines is considered to be appropriate”.</i></p>
<b>4. Section 94 Contribution</b>	
<ul style="list-style-type: none"> <li>Clarify Section 94 contributions and provision of infrastructure for the site.</li> </ul>	<p>Pittwater Council's current S.94 plan for Warriewood Valley does not make provision for apartment development. If Pittwater Council's S.94 plan (\$67,334.29 per dwelling) was applied to the Preferred Concept Plan for 559 apartments it would yield a total S.94 charge of approximately \$37.6 million, which after subtracting the \$3.6 million in fixed costs would still yield \$34.04 million in variable costs, or some \$27,697 per head (being \$34.04m/1229 people).</p> <p>This is inconsistent with other Sydney Metropolitan Council's (for example in the City of Sydney and former South Sydney areas, and also in Ku-ring-gai LGA, S.94 contributions are around \$20,000 per dwelling or less) and less than other areas in Pittwater.</p> <p>On 4 June 2010, The Minister for Planning revised the</p>

Issue raised by DoP	Response																														
	<p>approach for setting local development contributions. This included:</p> <ul style="list-style-type: none"><li>a \$20,000 per residential lot or dwelling limit on local development contributions; and</li><li>allowing councils to apply for special rate variations for legitimate council costs arising from development.</li></ul> <p>The Minister's direction under Section 94E of the EP&amp;A Act 1979 applies to monetary contributions required by conditions of development consent imposed by councils under section 94 of the EP&amp;A Act.</p> <p>The Direction provides that a council must not impose a condition requiring a development contribution under section 94 of the EP&amp;A Act that requires the payment of a monetary contribution of more than \$20,000 for each residential dwelling.</p> <p>It is requested that the Department of Planning impose a Section 94 Development Contribution of \$20,000 per dwelling in accordance with the Minister for Planning's Section 94E Direction of 4 June 2010.</p> <p>This contribution rate will equate to a total of \$11,180,000.</p>																														
<ul style="list-style-type: none"><li>Confirm what infrastructure s to be provided as a direct result of the proposal and works-in-kind.</li></ul>	<p>The following table provides a summary of proposed works-in-kind:</p> <table><tr><th>Item</th><th>Description</th><th>Total (including G.S.T)</th></tr><tr><td>1</td><td>Roundabout on Macpherson Street</td><td>\$72,563</td></tr><tr><td>2</td><td>Road widening on Macpherson Street</td><td>\$1,516,634</td></tr><tr><td>3</td><td>Undergrounding of electrical and communication overhead cable services due to road-widening on Macpherson Street</td><td>\$982,450</td></tr><tr><td>4</td><td>Roundabout on Boondah Road &amp; Macpherson Street intersection</td><td>\$402,948</td></tr><tr><td>5 + 6</td><td>Road widening on Boondah Road</td><td>\$900,663</td></tr><tr><td>7</td><td>New public road thru site (incl deviation of Sydney Water trunk watermain).</td><td>\$3,657,328</td></tr><tr><td>10</td><td>Fern Creek rehabilitation and overland flow culvert from Boondah road</td><td>\$735,304</td></tr><tr><td>11</td><td>Cycleway</td><td>\$1,696,680</td></tr><tr><td></td><td><b>Total works-in-kind</b></td><td><b>\$9,964,570</b></td></tr></table> <p>Note: All costs that are listed above include design fees, relevant authority approval fees and charges, survey costs, project management and professional fees, trades costs, supervision fees, preliminaries and builders margin. <b>Appendix L</b> provides a cost estimate for the proposed works-in-kind.</p>	Item	Description	Total (including G.S.T)	1	Roundabout on Macpherson Street	\$72,563	2	Road widening on Macpherson Street	\$1,516,634	3	Undergrounding of electrical and communication overhead cable services due to road-widening on Macpherson Street	\$982,450	4	Roundabout on Boondah Road & Macpherson Street intersection	\$402,948	5 + 6	Road widening on Boondah Road	\$900,663	7	New public road thru site (incl deviation of Sydney Water trunk watermain).	\$3,657,328	10	Fern Creek rehabilitation and overland flow culvert from Boondah road	\$735,304	11	Cycleway	\$1,696,680		<b>Total works-in-kind</b>	<b>\$9,964,570</b>
Item	Description	Total (including G.S.T)																													
1	Roundabout on Macpherson Street	\$72,563																													
2	Road widening on Macpherson Street	\$1,516,634																													
3	Undergrounding of electrical and communication overhead cable services due to road-widening on Macpherson Street	\$982,450																													
4	Roundabout on Boondah Road & Macpherson Street intersection	\$402,948																													
5 + 6	Road widening on Boondah Road	\$900,663																													
7	New public road thru site (incl deviation of Sydney Water trunk watermain).	\$3,657,328																													
10	Fern Creek rehabilitation and overland flow culvert from Boondah road	\$735,304																													
11	Cycleway	\$1,696,680																													
	<b>Total works-in-kind</b>	<b>\$9,964,570</b>																													
<ul style="list-style-type: none"><li>Provide further justification for why additional public open space land dedications either on-site or off-site for not</li></ul>	<p>The Preferred Concept Plan has addressed the issues raised by the Department of Planning, Council and in some of the</p>																														

Issue raised by DoP	Response
proposed.	<p>public submissions about the inadequacy of open space on site, particularly the active open space provided.</p> <p>The following to the design of the open spaces will improve the utility of the spaces as follows:</p> <ul style="list-style-type: none"> <li>- The design of the proposed central park between Buildings D/E and F/G has been amended to create more usable active open space. The park will contain a generous picnic shelter containing BBQ's seating and tables as well as a large grassed viewing mound suitable for passive uses and relaxation. Included in the central park in Stage 1 is an enlarged area of lawn of 900m2 for children to actively play, tick a ball or run around.</li> <li>- An area outside the main entry to the pool centre has been designed with play equipment for children's active play. This space is to be fenced for child safety.</li> <li>- An active exercise area has been included in the Stage 2 area of the site, which is centrally located in the pocket park.</li> <li>- The deletion of the private road between Buildings A/B/C and D/E has created more area of common landscaped open space in the Stage 1 Preferred Project.</li> </ul> <p>The subject site comprises is an important open space link along the Fern Creek and Warriewood Wetlands Corridor. The combined cycleway and pedestrian pathway contributes to the activate recreation facilities available in Warriewood Valley and links to larger sporting facilities and parklands.</p> <p>Development contributions are to be paid by the Proponent, associated with this development in accordance with the Environmental Planning and Assessment Act 1979, which can contribute to the upgrading of existing parklands or the purchase of additional land for open space purposes.</p>
<b>Schedule 2 – Additional Information Requested</b>	
<ul style="list-style-type: none"> <li>Address the "Warriewood Valley Planning Framework 2010".</li> </ul>	<p>It is noted that the Warriewood Valley Planning Framework 2010 was not listed in the Director General's Environmental Assessment Requirements for the Concept Plan and Stage 1 Project Application (DGRs). The 2010 Planning Framework was adopted by Council on 3 May 2010</p> <p>The planning framework is not applicable to the proposed development as it was adopted by Council after the Concept Plan and Stage 1 Project Application was declared a Part 3A Major Project and issued with DGRs.</p>
<ul style="list-style-type: none"> <li>Additional Plans <ul style="list-style-type: none"> <li>- Plans, Long Sections and Cross Sections.</li> <li>- Plans and sections indicating extent of cut.</li> </ul> </li> </ul>	<p>Meriton Apartment has prepared additional plans and sections as requested by the Department of Planning. Refer to <b>Appendix B</b>. Architectural site sections are provided.</p> <p>The Civil Infrastructure drawings at <b>Appendix D</b> show the extent of cut and fill provided.</p>
<ul style="list-style-type: none"> <li>Address impacts of cut and fill on Fern Creek Corridor including calculations of proposed fill.</li> </ul>	<p>The total amount of cut and fill proposed, is shown in the Stormwater and Environmental Management report at <b>Appendix F</b>.</p> <p>Additional environmental management and mitigation measures have been included in the Revised Statement of</p>



Issue raised by DoP	Response																	
	Commitments at <b>Section 4</b> .																	
<ul style="list-style-type: none"><li>Confirm the pervious area percentage for the site (excluding Fern Creekline corridor) meets 50% requirement including footprint of all basements car parking, roads, access driveways and paths as impervious area (based on a developable area of 7.05 hectares – excluding creekline corridor).</li></ul>	The area of deep soil landscaping (pervious surfaces) is 57% of the site. Refer to Architectural drawings DA07 Deep Planting Plan prepared by Meriton Apartments Pty Ltd.																	
<ul style="list-style-type: none"><li>Additional photomontages at eyelevel from Macpherson Street and Boondah Road looking into the site from the public domain including the intersection of the new public road with Macpherson Street and Boondah Road between:<ul style="list-style-type: none"><li>the child care centre and Building A,</li><li>Building C and H</li><li>Building J and N</li><li>Building N and O (along the alignment of the local road</li></ul></li></ul>	<p>The photomontage from Macpherson Street at the site entry road has been revised.</p> <p>The other locations where photomontages have been requested to be provided are located in the Stage 2 area and the building and landscape design has not be revolved for these areas of the site. Photomontages can be prepared for the future Stage 2 Project Application.</p>																	
<ul style="list-style-type: none"><li>Schedule of unit sizes to demonstrate compliance with RFDC.</li></ul>	<p>The following table provided the minimum sizes of proposed units in Stage 1 Preferred Project (excluding external private open space):</p> <table><tr><th>Unit type</th><th>NSW RFDC 2002 unit size (m<sup>2</sup>)</th><th>Stage 1 Preferred Project minimum unit size (m<sup>2</sup>)</th></tr><tr><td>Studio</td><td>38.5m<sup>2</sup></td><td>45m<sup>2</sup></td></tr><tr><td>1 bed</td><td>50m<sup>2</sup></td><td>55m<sup>2</sup></td></tr><tr><td>2 bed (large)</td><td rowspan="2">80m<sup>2</sup></td><td>85m<sup>2</sup></td></tr><tr><td>2 bed (small)</td><td>78m<sup>2</sup></td></tr><tr><td>3 bed</td><td>124m<sup>2</sup></td><td>105m<sup>2</sup></td></tr></table> <p>With the exception of the 3 bedroom units, all units comply with the minimum NSW Residential Flat Design Code 2002 guidelines for minimum unit sizes.</p> <p>The NSW RFDC 2002, provides a guide for affordable housing, the are provided from the Affordable Housing Service minimum unit sizes that can contribute to housing affordability, as follows:</p> <ul style="list-style-type: none"><li>1 bedroom apartment – 50m<sup>2</sup></li><li>2 bedroom apartment - 70m<sup>2</sup></li><li>3 bedroom apartment - 95m<sup>2</sup></li></ul> <p>The proposed unit sizes provide an appropriate balance between providing affordable hosing whilst achieving a good level of amenity for residents.</p>	Unit type	NSW RFDC 2002 unit size (m <sup>2</sup> )	Stage 1 Preferred Project minimum unit size (m <sup>2</sup> )	Studio	38.5m <sup>2</sup>	45m <sup>2</sup>	1 bed	50m <sup>2</sup>	55m <sup>2</sup>	2 bed (large)	80m <sup>2</sup>	85m <sup>2</sup>	2 bed (small)	78m <sup>2</sup>	3 bed	124m <sup>2</sup>	105m <sup>2</sup>
Unit type	NSW RFDC 2002 unit size (m <sup>2</sup> )	Stage 1 Preferred Project minimum unit size (m <sup>2</sup> )																
Studio	38.5m <sup>2</sup>	45m <sup>2</sup>																
1 bed	50m <sup>2</sup>	55m <sup>2</sup>																
2 bed (large)	80m <sup>2</sup>	85m <sup>2</sup>																
2 bed (small)		78m <sup>2</sup>																
3 bed	124m <sup>2</sup>	105m <sup>2</sup>																
<ul style="list-style-type: none"><li>Solar access schedule for all apartments in Stage 1 to demonstrate compliance with RFDC.</li></ul>	<p>Heggies have undertaken an assessment of the amount of day lighting the proposed residential units in the Stage 1 development achieves. A summary schedule of units that achieve 3 hours of sunlight between 9am and 3pm at 21 June is included for each proposed building. Refer to <b>Appendix H</b>.</p> <p>SEPP 65 and the supporting NSW Residential Flat Design</p>																	

Issue raised by DoP	Response
	<p>Code provides relevant matters for consideration in relation to daylight to the residential units within the proposed development.</p> <p>The NSW Residential Flat Design Code contains the following Rule of Thumb:</p> <ul style="list-style-type: none"> <li>“Living rooms and private open spaces for at least 70% in a development should receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm in mid winter. In dense urban areas a minimum of to hours may be acceptable”.</li> </ul> <p>Sola access through living area windows and balconies of residential units during the winter solstice, 21 June between 9am and 3pm is relevant to the day lighting access assessment.</p> <p>Heggies modelled the proposed development and has presented Sun’s eye view diagrams every 15 minutes between 9am and 3.00pm. The number of apartments with 3 or more hours of direct sunlight through the living rooms and balconies were counted.</p> <p>A total of 70.1% of the residential development will receive sunlight on the Winter Solstice (21 June) between the hours of 9.00am and 3.00pm. Therefore the proposed Stage 1 Preferred Project satisfies the minimum daylight access requirements of SEPP 65 and the NSW RFDC 2002.</p>
<ul style="list-style-type: none"> <li>Increase setbacks of Buildings A, B, C, D, E and H from the internal access roads for sufficient area for street trees and landscaping.</li> </ul>	<p>The Preferred Project includes the deletion of the internal private road that was located between Buildings A/B/C and D/E. The road is replaced with common landscape area that will be accessible to residents of the adjacent buildings and their visitors.</p> <p>Access to the dwellings will be via the basement level car park level, as well as to the podium level common lift lobbies. Podium level units are to be accessible via the landscaped accessway and from the basement car park.</p>
<ul style="list-style-type: none"> <li>Ground water management plan/assessment to address post construction phases.</li> </ul>	<p>The proposal complies with the Pittwater Council control for minimum unbuilt upon area of 50% (deep soil landscape). A total of 57% of the site is to be deep soil landscape. Therefore it is considered the impacts on ground water are within the limits set under Council’s planning framework.</p> <p>The management of stormwater, wastewater and runoff will continue as part the project design and Pittwater DCP 21 in relation to the site’s proximity to the wetlands.</p>
<ul style="list-style-type: none"> <li>Update Bushfire Risk Assessment to reflect current proposed with increased density. May required increased APZs, which should be addressed.</li> </ul>	<p>An updated Bushfire Management Assessment has been prepared by Planning for Bushfire Protection Pty Ltd and is attached at <b>Appendix G</b>.</p> <p>The Bushfire Assessment states that the current proposal for the development of residential apartments and a child care centre at No 14-18 Boondah Road, Warriewood has been designed in accordance with the legislative requirements for building and development on bushfire prone land.</p> <p>Asset Protection Zones, access and egress paths, internal road design, water, gas and electricity supplies, landscaping and construction standards for the development have been</p>

Issue raised by DoP	Response
	<p>designed in accordance with the requirements of PBP.</p> <p>The proposed Asset Protection Zone distance of 25m to the south and east of development are appropriate for the proposed variations to the exhibited Environmental Assessment.</p> <p>The APZ provided for buildings L &amp; M is 10m in excess of the required 25m. [&gt;35m overall]</p> <p>The proposed APZ distance of 25m is appropriate for stage 2, Buildings O and P.</p> <p>The APZ provided for Buildings F and G is &gt;50m in excess of the required 25m.</p> <p>The provision of key issues and assessment provided by the NSW Rural Fire Service is appropriate for the proposed development.</p> <p>The proposed child care centre is not within the 100m buffer zone for the hazards to the south and east and on site Asset Protection Zones for this centre are in excess of the requirements of Table A.2.6 of Planning for Bushfire Protection Guideline.</p> <p>Provided the proposed development complies with the provision of key issues and assessment requirements No's 2-7 listed within the NSW Rural Fire Service correspondence dated 25th May 2010 the development of apartment buildings and a child care centre at No 14-18 Boondah Road Warriewood, including the proposed variations, satisfies the Objectives and Performance requirements.</p> <p>On the basis of the Planning for Bushfire Protection Pty Ltd advice it is therefore concluded that the proposed APZs do not need to be increased on account of the increased residential density and child care centre on the site.</p>
<ul style="list-style-type: none"> <li>Update Flora and Fauna Report to correct inconsistencies and clarify environmental protection measures: <ul style="list-style-type: none"> <li>Measures to be implemented before, during and after construction and at what stage of development.</li> <li>Reference VMP.</li> </ul> </li> </ul>	<p>An updated Flora and Fauna Report have been prepared by Total Earth Care and are provided at <b>Appendix J</b>.</p> <p>The updated report recommend environmental management measures and outlines the staging of these measures:</p> <ul style="list-style-type: none"> <li>Prior to the commencement of construction;</li> <li>During construction</li> <li>Post-construction</li> </ul> <p>The relevant environmental management and mitigation measures and their staging have been included in the revised Statement of Commitments at <b>Section 4</b> of this report.</p>
<ul style="list-style-type: none"> <li>Review SOC in light of updated Bushfire Management Plan.</li> </ul>	<p>As the updated assessment does not require revisions to the bushfire management measures recommended by Flamezone or by the NSW RFS, the Statement of Commitments does not need to be updated in relation to bushfire management measures.</p>
<ul style="list-style-type: none"> <li>Clarify and correct inconsistencies in relation to the width of the riparian land including Creek Restoration Zone.</li> </ul>	<p>The widths of the Riparian Land including the Core Riparian Zone has been clarified to be in accordance with the requirements of the DECCW and the NSW Office of Water. All documents submitted with the Preferred Project provide consistent widths of these zones.</p>

Issue raised by DoP	Response
<ul style="list-style-type: none"> <li>Confirm the location, capacity and design of the bio-retention basin will have adequate capacity commensurate with increased density.</li> </ul>	<p>There are two (2) bio-retention basin proposed in the stormwater treatment strategy for the site. The bioretention basin will receive flows from the pollutant traps. Basin A is located in the same location as proposed in the exhibited Environmental Assessment scheme.</p> <p>Bio-retention basin B is proposed to be relocated to adjacent Buildings P and O. The size and depth of the bioretention basins has been amended commensurate with the pollutant loads from the two sites and the increased residential densities.</p> <p>Refer to the revised Stormwater Management and Flooding Assessment report has been prepared by Brown Consulting and are provided at <b>Appendix F</b> and the revised civil infrastructure drawings have been prepared by AT&amp;L Civil Engineers &amp; Project Managers and are provided at <b>Appendix F</b>.</p>
<ul style="list-style-type: none"> <li>Update Brown Consulting Stormwater and Environmental Management Plan 2010 taking into consideration increased density and site cover.</li> </ul>	<p>Refer to the revised Stormwater Management and Flooding Assessment report has been prepared by Brown Consulting and are provided at <b>Appendix F</b> and the revised civil infrastructure drawings have been prepared by AT&amp;L Civil Engineers &amp; Project Managers and are provided at <b>Appendix D</b>.</p>
<ul style="list-style-type: none"> <li>Environmental Site Assessment should confirm the site can be remediated to a standard suitable for proposed residential and child care uses.</li> </ul>	<p>A statement prepared by Benbow Environmental describes how the site can be made suitable through remediation works for the proposed residential and child care centre uses has been prepared by Benbow Environmental and submitted under separate cover.</p>

## NSW Transport & Infrastructure

NSW Transport & Infrastructure provide a submission on the exhibited Environmental Assessment dated 17 May 2010. **Table 11** provides a response to each of the issues raised in the NSW T&I submission. Refer to **Appendix M**.

**Table 11. Response to NSW Transport and Infrastructure submission**

Issue raised by NSW T&I	Response
<ul style="list-style-type: none"> <li>Support for low level of visitor parking proposed on-site.</li> </ul>	<p>It is noted that the NSW T&amp;I support the provision of visitor parking at the rate proposed in the exhibited Environmental Assessment. The proposed rate of 1 space per 7 apartments differs slightly from the Council DCP date of 1 space per 4 apartments. The proposed visitor parking rate is in line with the RTA Guide to Traffic Generating Development which recommended 1 space per 5-7 dwellings.</p>
<ul style="list-style-type: none"> <li>Support for integration of bicycle parking facilities for residents and visitors on site.</li> </ul>	<p>The Stage 1 Preferred Project provides for 30 bicycle parking spaces.</p>
<ul style="list-style-type: none"> <li>Support for the proposed pedestrian and cycling paths between the site and surrounding centres of activity.</li> </ul>	<p>The pedestrian and cycle paths throughout the development were part of the approval by Pittwater Council. The proposed pathways link into the local network of cycleways and pathways along Fern Creek and Warriewood Wetlands that link to Warriewood Shopping Centre and surrounding areas.</p>
<ul style="list-style-type: none"> <li>Recommends the proposed car parking rates for residential be reduced to reflect the rates contained within the RTAs Guide to Traffic Generating Developments for 1 and 3 bedroom apartments.</li> </ul>	<p>The proposed parking rate is as follows:</p> <ul style="list-style-type: none"> <li>Studio and one-bed apartments – 1 space</li> <li>Two-bed apartments – 1.5 space</li> <li>Three-bed apartments – 2 spaces</li> <li>Visitors – 1 space per 7 apartments</li> </ul> <p>This parking rate is considered appropriate:</p> <ul style="list-style-type: none"> <li>To Contain traffic generation whilst promoting public bus use, walking and cycling;</li> <li>The good bus service within easy walking distance;</li> <li>Appropriate to the anticipated car ownership rates, based on the Warringah LGA, with the following established car ownership: <ul style="list-style-type: none"> <li>One bedroom: 0.91 spaces</li> <li>Two-bedroom: 1.25 spaces</li> <li>Three-bedroom: 1.52 spaces</li> </ul> </li> <li>Neighbourhood shopping centre (with supermarket) within easy walking distance.</li> <li>Consistent with the RTA Guide to Traffic Generating Development for visitor parking provision.</li> </ul>
<ul style="list-style-type: none"> <li>Requests the preparation and implementation of a location specific sustainable travel plan, such as a Travel Access Guide (TAG), for residents and visitors to the site to support the use of non-car modes of transport.</li> </ul>	<p>A Travel Access Guide is to be prepared by the Proponent. Refer to the revised Statement of Commitments at <b>Section 4</b>.</p>
<ul style="list-style-type: none"> <li>Bicycle parking should be provided at the rates specified within the NSW Planning Guidelines for Walking and Cycling.</li> </ul>	<p>The NSW Planning Guidelines for Walking and Cycling provide the following bicycle parking rates:</p> <ul style="list-style-type: none"> <li>All unit dwellings <ul style="list-style-type: none"> <li>Resident - 20–30% of units (i.e. 1 space per 3-5 units; and</li> <li>Visitor - 5–10% of units (i.e. 1 space per 10-20 units)</li> </ul> </li> </ul> <p>For the Stage 1 Project Application of 295 dwellings adopting the NSW Planning Guidelines for Walking and Cycling will require between 59 and 98 residential bicycle spaces. Between 15 and 30 visitor bicycle spaces will be required. A total of 30 bicycle spaces are proposed. Additional bicycle storage can be accommodated in the individual storage cages.</p>

## Department of Environment, Climate Change and Water (DECCW)

DECCW provided a submission on the exhibited Environmental Assessment dated 16 June 2010. **Table 11** provides a response to each of the issues raised in the NSW T&I submission. Refer to **Appendix M**.

**Table 12. Response to DECCW submission**

Issue raised by DECCW	Response
<p><b>1. Biodiversity issues</b></p> <p><b>1.1 Threatened Fauna</b></p> <ul style="list-style-type: none"> <li>Consideration be given to greater retention of hollow bearing/habitat trees.</li> <li>Removal of hollow bearing trees that cannot be retained be staged and occur after nest boxes are in place.</li> <li>That nest boxes be suitably designed for target species (such as microbats, large forest owls) and installed by an ecologist with appropriate knowledge and experience.</li> <li>That the Flora and Fauna Report be modified to state how many nest boxes are to be installed, identify their target species and include a requirement for a monitoring program for the installed nest boxes for a period of 10 years to ensure adequate habitat is retained over time.</li> </ul>	<p>To avoid impacts to hollow dependent fauna, appropriate precautions adopted prior to and during construction should include a pre-clearing surveys of those trees with hollows that requires removal. The retention of as many poplars will provide habitat for hollow dependent species. This retention of the Poplars trees is recommended to include all areas within the riparian zones and asset protection zone and any other Poplar trees where vegetation clearing and earthworks does not occur.</p> <p>The Flora and Fauna Assessment report includes the following environmental management measures to be implemented prior to the commencement of construction, in relation to hollow dependent fauna:</p> <ul style="list-style-type: none"> <li><i>The retention of hollow-bearing trees and all native trees outside of the proposed development footprint is required. This includes Poplars located in the south-western and southern parts of the site. Trees identified for retention will be inspected by a qualified arborist to assess their safety, longevity and suitability for retention within a future residential subdivision area, while trees within the riparian zones and flood storage area should be retained. The Poplars will be removed in stages to ensure hollow dependent fauna habitat is retained. Under Section B4.4 of P21 DCP there is to be no net loss of native canopy trees as a result of the development.</i></li> <li><i>Installation of nest boxes for hollow dependent species such as birds and microbats prior to tree removals within retained vegetation in close proximity to previous Poplar plantations. A Nest Box Plan should be prepared and approved prior to construction that sets out the numbers of nest boxes required, target species, nest box designs, installation and monitoring requirements.</i></li> </ul> <p>Refer to the revised Statement of Commitments at <b>Section 4</b> of the report and the revised Flora and Fauna report at <b>Appendix J</b>.</p>
<p><b>1.2 Endangered Ecological Communities</b></p> <ul style="list-style-type: none"> <li>Recommends the impacts of the proposal on each EEC be separately assessed and that detailed floristic evidence be provided to justify the conclusions of the F&amp;F report.</li> </ul>	<p>Refer to the revised Flora and Fauna report at <b>Appendix J</b>.</p>
<p><b>1.3 Loss of Habitat as a Result of Asset Protection Areas and Flood Management Works</b></p> <ul style="list-style-type: none"> <li>DECC considers all vegetation to be retained (other than that contained in the agreed Core Riparian Zone – also referred to as the Riparian Protection Zone) will be</li> </ul>	<p>Loss of habitat as a result of Asset Protection Areas and Flood Management Works has been considered in the revised Flora and Fauna Assessment.</p> <p>Refer to the revised Flora and Fauna report at <b>Appendix J</b>.</p>

Issue raised by DECCW	Response
<p>significantly impacted as a result of the buildings, associated infrastructure (the bio-retention pond, contouring for flood retention and bicycle path) or in complying with the required Asset Protection Zone (APZ).</p> <ul style="list-style-type: none"> <li>The Flora and Fauna Report states that the remainder of the native vegetation on site will be preserved inside the proposed buffer areas. However, the EA shows that the 10-metre buffer zone actually forms part of the 25-metre APZ which will require substantiate modification.</li> <li>The bio-retention pond and elevated bicycle track are located within this 10 metre buffer area in the location where the EECs are mapped.</li> <li>Inconsistencies between the Flora and Fauna report and other consultant reports in the extent of revegetation retention and the APZ.</li> </ul>	
<p><b>1.4 Adequacy of Environmental Assessment and Recommendations</b></p> <ul style="list-style-type: none"> <li>DECCW considers there will be direct and indirect impacts on the EECs due to increased fragmentation resulting in edge effects and the works required for the flood storage and bio-retention areas.</li> </ul>	<p>The Preferred Concept Plan has been amended to retain and rehabilitate as much of the remnant vegetation as possible on the site.</p> <p>A vegetated link through the site between Warriewood Wetlands and Boondah Road and further into the Sydney Water Sewage Treatment Plan site has been enhanced. The Preferred Project includes the retention of a larger areas of Endangered Ecological Communities. Areas of remnant vegetation, which are representative of components of the Swamp Sclerophyll Forest on the coastal floodplains of the NS North Coast, Sydney Basin and South East Bioregion will be retained and rejuvenated where located outside the development area. These areas are mainly contiguous with Warriewood Wetland and located within the proposed Core Riparian Zone and vegetation buffer areas. An area of EEC between the wetland and Boondah Road between building O and the roadway 012 adjoining Building B will also be retained.</p> <p>This is an increase from the previous design, and will reduce the impacts to the community than would have occurred in the exhibited Environmental Assessment, and Pittwater Council DA approved scheme. By avoiding impacts to the large area of retained EEC, the potential fragmentation and isolation of Warriewood Wetlands will possible habitat in the adjacent Sydney Water site will be reduced.</p> <p>Refer to the revised Flora and Fauna report at <b>Appendix J</b>.</p>
<ul style="list-style-type: none"> <li>Assessment of off-site impacts of the proposal on the regionally significant Warriewood Wetlands.</li> </ul>	<p>The revised Flora and Fauna Assessment includes an assessment of the proposed development on the Warriewood Wetlands. Refer to the revised Flora and Fauna report at <b>Appendix J</b>.</p> <p>The proposed development of the site may indirectly impact on the adjacent Warriewood Wetland. The boundary of the wetland was assessment in detail in the 2004 assessment (TEC 2004) and it was concluded that the distance of the wetland boundary from the subject site varies from approximately 6.8 metres to 29.8 metres to the south and west of the site boundaries respectively. The wetland boundary line is included on the design plans for the proposal, and has been used as the basis of locating the CRZ and subsequent riparian and asset protection zones. Increased stormwater volumes will enter the wetland due to the increased hard surface catchments area as a result of the development,. Stormwater will enter the wetland from</p>

Issue raised by DECCW	Response
	<p>the two overland flow paths, the flood storage area, overflow from the bioretention basins and the stormwater pipe to Road 04.</p> <p>Environmental Management and Mitigation measures for the various stages of development are proposed in the Statement of Commitments at <b>Section 4</b> of this report.</p>
<ul style="list-style-type: none"> <li>The Statement of Commitments should include commitments for environmental measures post construction and more clearly define what measures are to be undertaken for each stage of the development.</li> </ul>	<p>The exhibited draft Statement of Commitments has been revised to include reference to the measures identified including staging of the proposed Environmental Management Measures.</p>
<p>Recommendations to give greater clarity to the environmental protection measures:</p> <ul style="list-style-type: none"> <li>The F&amp;F report recommendations be amended to include environmental management measures to be implemented before, during and after construction.</li> </ul>	<p>Refer to the revised Flora and Fauna report at <b>Appendix J</b>. Environmental management measures have been specifically referenced in terms of the various phases and stages of development. Also refer to <b>Section 2</b> of this report in relation to the staging of environmental management measures.</p>
<ul style="list-style-type: none"> <li>More clearly delineate what environmental protection measures will be undertaken for each stage of development.</li> </ul>	<p><b>Section 2</b> of this report outlines the proposed staging of the development including the staging of environmental management measures.</p>
<ul style="list-style-type: none"> <li>Commitment to undertake ecological restoration work is supported but these should reference the measures identified in the Vegetation Management Plan prepared by Total Earth Care.</li> </ul>	<p>The exhibited draft Statement of Commitments has been revised to include reference to the measures identified in the Vegetation Management Plan prepared by Total Earth Care.</p>
<ul style="list-style-type: none"> <li>The SOC should be revised in light of the updated Bushfire Risk Assessment Report.</li> </ul>	<p>Refer to the revised Statement of Commitments at <b>Section 4</b>.</p>
<p>2.0 Riparian Buffer Zones and Landscaping of Open Space Areas</p> <ul style="list-style-type: none"> <li>The proposal includes works in the Fern Creek riparian corridor which are inconsistent with protecting riparian and ecological values of the waterways and wetland.</li> </ul>	<p>The proposed development balances a range of objectives in relation to ecological rehabilitation and open space and recreational utility. The proposed works to Fern Creek and the establishment of riparian vegetation is generally consistent with the approval granted by Pittwater Council to Development Consent DA526/08.</p> <p>The proposed development is consistent with the Warriewood Valley Landscape Master Plan which supports the inclusion of a combined pedestrian pathway and cycleway, as well as accommodating the requirements for flood storage and stormwater management measures inclusion bio-retention basins.</p>
<p>3.0 Bushfire Asset Protection Zones and Riparian/Corridor Areas.</p> <ul style="list-style-type: none"> <li>Given the substantial increase in development footprint and number of residents, it is recommended that the Bushfire Risk Assessment be updated to assess the current proposal and increased residential densities and commercial facilities including the child care centre. Should an increase in the extent of APZs be required further environmental assessment would be required.</li> </ul>	<p>A Bushfire Consultant has revised the Preferred Project and has provided advice on appropriate bushfire management measures for the development.</p> <p>The Asset Protection Zones with the Environmental Assessment scheme have been reviewed. And confirmed to be adequate for the proposed increase in residential density and child care centre use.</p> <p>Refer to updated bushfire assessment advice at <b>Appendix G</b>.</p>
<p><b>4.0 Flood plan Risk Management Aspects</b></p> <p><b>4.2 Flood Evacuation</b></p> <ul style="list-style-type: none"> <li>Flood proofing of residential housing structures up to the PMF level will be required.</li> </ul>	<p>It is noted that modelling suggests no dwelling will be subject to inundation. Flood Planning Levels for the proposed development vary from 3.61m to 3.90m AHD. Given the estimated increases in flood levels, as a result of Climate Change, it is expected that flood planning levels within the site would increase to 3.56m – 3.85m AHD as a</p>



Issue raised by DECCW	Response
	<p>result of the high climate change scenario (worst case) for the 100 year ARI storm event.</p> <p>The proposed minimum floor levels have been set at 4.5 m AHD, well above the expected 100 year floor level, which is increased as a result of climate change.</p> <p>Refer to the updated Stormwater and Flooding Assessment report prepared by Brown Consulting at <b>Appendix F</b>.</p>
<p><b>4.3 Proposed minimum floor level</b></p> <ul style="list-style-type: none"> <li>Confirmation that the estimate flood level plus freeboard including potential climate change impacts, is below the proposed minimum floor level of 4.5m AHD.</li> <li>Recommended that confirmation be obtained from the Consultant and/or Council that any potential pit/pipe and culvert blockages due to debris will not cause floor levels to exceed the proposed minimum floor level.</li> <li>It is recommended that DoP be satisfied that: <ul style="list-style-type: none"> <li>the existing versus development Mannings “n” roughness values used in the RAFTS modelling is an appropriate basis for determining the detention basin sizes; and</li> <li>the basis will have a spillway system to safely pass floods larger than from the 100 year design flood event.</li> </ul> </li> </ul>	<p>The proposed flood planning level plus freeboard is below the proposed minimum residential floor level of 4.5m AHD.</p> <p>The methodology for determining appropriate detention basin sizes is the same approach used by Council’s consultants Lawson &amp; Treloar.</p> <p>The detailed design of the bio-retention basin are to incorporate a spillway system.</p> <p>Refer to the updated Stormwater and Flooding Assessment report prepared by Brown Consulting at <b>Appendix F</b>.</p>
<p><b>5.0 Potential land use conflict arising from odour issue</b></p> <p>DECCW concerned that the EA has not addressed the potential land use conflicts that could arise through the siting of medium to high density residential development adjacent to the STP.</p>	<p>Sydney Water Corporate have been consulted in the preparation of the Environmental Assessment in relation to the impact of the STP on the amenity of residential development on the subject site in terms of odour.</p> <p>With the proposed capping of the STP, residential development of the nature and location proposed is acceptable to Sydney Water Corporation.</p> <p>Refer to response to Sydney Water submission on the exhibited Environmental Assessment of this report.</p>
<p><b>6.0 Construction noise</b></p> <ul style="list-style-type: none"> <li>Should the development proceed, a noise and vibration assessment should be conducted prior to any works commencing, in accordance with DECCW’s “Interim Construction Noise Guideline”.</li> </ul>	<p>A noise and vibration assessment is to be prepared prior to the commencement of any works.</p> <p>Refer to the revised Statement of Commitments at <b>Section 4</b>.</p>
<p><b>7.0 Waste Management</b></p> <p>A Waste Management Plan for the demolition and construction phase of the project is recommended to be prepared.</p>	<p>A Waste Management Plan for demolition and construction phases of each stage of construction will be prepared prior to the issue of a Construction Certificate for each state of construction.</p> <p>Refer to the revised Statement of Commitments at <b>Section 4</b>.</p>

## NSW Office of Water

NSW Office of Water provided a submission on the exhibited Environmental Assessment that was attached to the DECCW submission dated 16 June 2010. **Table 11** provides a response to each of the issues raised in the NSWT&I submission. Refer to **Appendix M**.

**Table 13. Response to NSW Office of Water submission**

Issue raised by Office of Water	Response
<b>1. Protection and enhancement of Warriewood Valley, Fern Creek and riparian land</b>  1. An assessment of the potential impacts of cut and fill on Fern Creek, Warriewood Wetland, the protection and rehabilitation of riparian land and local groundwater conditions is required.  2. Details on the following are required: <ul style="list-style-type: none"> <li>The proposed areas, depths of excavation and potential impacts associated with the excavation</li> <li>The proposed depths, volumes and levels of filling and the potential impacts associated with the filling.</li> </ul>	<p>An assessment of the impacts of cut and fill on fern creek, Warriewood Wetland and riparian land and local ground water conditions is provided in the revised Flora and Fauna report at <b>Appendix J</b>.</p> <p>Refer to the Stormwater and Environmental Management Plan with sections and plans of proposed cut and fill for flood mitigation works.</p>
3. Any flood storage areas should not be excavated lower than the bed of fern Creek.	<p>Flood storage areas are not proposed to be excavated below the level of Fern Creek. The Preferred Project maintains the 20m CRZ and the 25m APZ and 10m vegetation buffer for the wetlands.</p>
4. Bulk earthworks should not result in adverse impacts on Fern Creek, Warriewood Wetland, the protection and rehabilitation of riparian land or local groundwater conditions.	<p>The revised Statement of Commitments includes commitments to protect Fern Creek, Warriewood Wetland, the riparian land and local ground water conditions from construction activities as well as the use of the land for residential development. Refer to <b>Section 4</b> of this report.</p>
<b>2. Creek restoration</b> <ul style="list-style-type: none"> <li>Works to Fern Creek should be in accordance with the DWE Guidelines (February 2008) for controlled activities in-stream works.</li> <li>Details are required on: <ul style="list-style-type: none"> <li>the extent that Fern Creek may be required to be modified.</li> <li>the impact of the creek restoration works on exiting native riparian vegetation.</li> <li>How the creek can be stabilised and natural solutions achieved.</li> </ul> </li> </ul>	<p>The proposed works to Fern Creek were approved by Pittwater Council under Development Consent DA526/08. The details requested by The NSW Office of Water are contained in the Civil Infrastructure drawings at <b>Appendix D</b> of this Preferred Project Report.</p> <p>The ecosystem functions including stabilising stream banks, minimising sedimentation and nitrification of the stream, providing flora and fauna habitat are to be achieved by the proposed restoration works to the Fern Creek corridor and excluding all infrastructure from the CRZ.</p>
<b>3. Riparian land</b> <ul style="list-style-type: none"> <li>Inconsistencies between documents submitted with the EA regarding the width of the riparian land.</li> <li>The Core Riparian Zone width along Warriewood Wetland should be no less than 25 metres measured from the top of the bank and the vegetated buffer should be no less than 10 metres.</li> <li>If 50 metre vegetated buffer zone is proposed, it is</li> </ul>	<p>The inconsistencies between documents submitted with the Environmental Assessment have been clarified in this Preferred Project Report consistent with the requirements of the NSW Office of Water and consistent with the Pittwater Council approval of the Development Consent DA DA526/08.</p> <p>The Core Riparian Zone width along Warriewood Wetland is 20 metres measured from the top of the bank AND WAS REQUESTED BY Pittwater Council. The Preferred Project has excluded all infrastructure from the CPZ with the</p>

Issue raised by Office of Water	Response
<p>recommended DoP support this.</p> <ul style="list-style-type: none"> <li>Clarification is required on the point on which the CPZ is to be measured (i.e. top of bank).</li> </ul>	<p>exception of the lightweight boardwalk bridge crossing for the combined cycleway and pedestrian pathway.</p> <p>The vegetated buffer is at least 10 metres in width.</p>
<p><b>4. Bio-retention pond (Basin B)</b></p> <ul style="list-style-type: none"> <li>Clarification is required on the proposed location of the bio-retention pond (Basin B) in relation to the riparian land adjacent to Warriewood Wetland.</li> <li>NOW support locating the bio-retention basin outside the CRZ and VB if possible.</li> </ul>	<p>The proposed bio-retention basin "B" have been redesigned in response to the issues raised during the exhibition period to accommodate necessary bio-retention and flood storage requirements for the site. Refer to the revised Stormwater Management Plan prepared by Brown Consulting at <b>Appendix F</b>.</p> <p>The bio-retention basin B is located outside the Core Riparian Zone. Where possible all infrastructure has been removed from the vegetation buffer as part of the Preferred Project, however this zone does include part of the bio-retention basin B and the flood storage area. Existing remnant native vegetation is to be retained within the 10m vegetation buffer zone, with other areas revegetated using local endemic vegetation characteristic of local communities. The type of species, provenance and densities are to be established in accordance with the Vegetation Management Plan.</p> <p>The Preferred Project design for the vegetation buffer s in accordance with Council's approved design, which has an outer Protection Zone of the APZ that coincides with the vegetation buffer zone. Additional revegetation works on the site outside of the vegetation buffer zone such as the Fern Creek corridor aim to compensate for this fact.</p>
<p><b>5. Asset Protection Zone</b></p> <ul style="list-style-type: none"> <li>Clarification is required on the proposed location of the APZ in relation to the riparian land at the site (CRZ and VB) as the EA documents provide differing locations for the APZ in relation the riparian land.</li> <li>The APZ should be located adjacent to but outside the riparian areas.</li> <li>The APZ may be used to locate perimeter roads, active open space, bike paths or WSUD.</li> </ul>	<p>The revised Bushfire Assessment Report outlines the APZs required for the preferred project. Refer to <b>Appendix G</b>.</p> <p>The APZs are proposed outside the riparian corridor and contain the cycleway. The cycleway forms the boundary between the Riparian Corridor and the APZ.</p>
<p><b>6. Ground water</b></p> <ul style="list-style-type: none"> <li>Recommended conditions of approval for temporary dewatering will be provided to DoP in conjunction with recommendation conditions relevant to the riparian areas.</li> <li>Bulk earthworks should not result in adverse impacts on the local ground water conditions or ground water dependent ecosystems.</li> </ul>	<p>The revised Statement of Commitments at <b>Section 4</b> include environmental management and mitigation measures that aim to limit the impact of bulk earthworks on ground water dependent eco-systems in the vicinity of the site.</p>
<p><b>7. Statement of Commitments</b></p> <ul style="list-style-type: none"> <li>Clarification is required on proposed riparian land zones and APZ widths.</li> </ul>	<p>As stated above, the riparian land zones and APZ widths have been clarified in this Preferred Project Report. The revised road and building layout incorporates the required widths of the riparian zone land and APZ. Refer to the revised Statement of Commitments at <b>Section 4</b>.</p>

## Housing NSW

Housing NSW provided a submission on the exhibited Environmental Assessment dated 17 May 2010. **Table 14** provides a response to each of the issues raised in the Hosing NSW submission.

Refer to **Appendix M**.

**Table 14. Response to Housing NSW submission**

Issue raised by Housing NSW	Response
<ul style="list-style-type: none"> <li>Suggests that the case for inclusion of affordable housing in the Meriton proposal is strong and should be considered by the Proponent.</li> </ul>	<p>It is noted that there is no statutory requirement for the provision of housing towards an affordable retinal housing scheme on the subject site.</p> <p>The proposal contributes to housing affordability by increasing provision of smaller dwellings. It is considered that the development will provide affordable alternatives to large 3-4 bedroom detached dwellings, which is the predominant form of Housing in the Pittwater LGA.</p> <p>The North East Subregional Strategy, prepared by the Department of Planning describes the existing housing stock within the subregion including Pittwater LGA which makes up 80% of the dwellings in Pittwater. This form of housing is often priced out of reach of younger people wanting to remain living on the northern beaches.</p> <p>The NSW RFDC 2002, provides a guide for affordable housing, that are provided from the Affordable Housing Service minimum unit sizes that can contribute to housing affordability, as follows:</p> <ul style="list-style-type: none"> <li>1 bedroom apartment – 50m<sup>2</sup></li> <li>2 bedroom apartment - 70m<sup>2</sup></li> <li>3 bedroom apartment - 95m<sup>2</sup></li> </ul> <p>The proposed units are generally consistent with the minimum sizes with some larger 2 and 3 bedroom units.</p>

### NSW Rural Fire Service

NSW Rural Fire Service provides a submission on the exhibited Environmental Assessment dated 17 May 2010. The NSW Rural Fire Service submission includes recommended conditions, which are responded to in **Table 15**. Refer to **Appendix M**.

**Table 15. Response to NSW Rural Fire**

Issue raised by NSW Rural Fire Service	Response
1. The Development proposal is to comply with the subdivision layout and design details identified on the drawings prepared by Meriton Apartments Pty Ltd, numbered DA00 to DA11 and DA20 to DA26, revision A, dated 19/02/2010.	The comments of the RFS are noted and recommended conditions 2-7 are equally relevant to the Preferred Project.  The Department of Planning requested that an updated Bushfire Risk Assessment be provided with the Preferred Project Report to reflect the current proposal with increased density and an assessment of the commercial uses including neighbourhood shops and child care centre. Refer to <b>Table 10</b> .
2. At the commencement of building works and in perpetuity the property to the south and east of the proposed development, to a distance of 25 metres shall be maintained as an inner protection area (IPA) as outlined within section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document "Standards for asset protection zones".	It is noted that the two neighbourhood shops have been deleted from the Preferred Stage 1 Preferred Project and Preferred Concept Plan.  Planning for Bushfire Protection Pty Ltd has reviewed the Preferred Concept Plan and Stage 1 Preferred Project and prepared a bushfire assessment in support of the Preferred Project. Specifically, the bushfire assessment has considered the previous Bushfire Assessment undertaken by Flamezone and submitted with the exhibited Environmental Assessment, and makes the following conclusions:
3. Water, electricity and gas are to comply with section 4.1.3 of the "Planning for Bush Fire Protection 2006".	<p><i>"The current proposal for the development of residential apartments and a child care centre at No. 14-18 Boondah Road, Warriewood has been designed in accordance with the legislative requirements for building and development on bushfire prone land.</i></p> <ol style="list-style-type: none"> <li><i>1. Asset Protection Zones, access and egress paths, internal road design, water, gas and electricity supplies, landscaping and construction standards for the development have been designed in accordance with the requirements of PBP.</i></li> <li><i>2. The proposed Asset Protection Zone distances of 25m to the south and east of development are appropriate for the proposed variation to the previous plan.</i></li> <li><i>3. The provision of key issues and assessment provided by the NSW Rural Fire Service is appropriate for the proposed development; and</i></li> <li><i>4. The proposed child care centre is not within the 100m buffer zone for the hazards to the south and east and on site Asset Protection Zones for this centre are in excess of the requirements of Table A.2.6 of PBP".</i></li> </ol> <p><i>Provided the proposed development complies with the provision of key issues and assessment requirements No. 2-7 listed within the NSW Rural Fire Service correspondence dated 25<sup>th</sup> May 2010 it is my considered opinion that the development of apartment buildings and a child care centre at No. 14-18 Boondah Road Warriewood, including the proposed variations, satisfies the Objectives and Performance requirements of the Building Code of Australia, Planning for Bushfire Protection 2006 AND Australian Standard AS3959, 2009".</i></p>
4. Public road access shall comply with Section 4.1.3 (1) of "Planning for Bush Fire Protection 2006".	
5	
a. New construction situated from 25m to >32m from the forested wetland hazard shall comply with Australian Standard AS3959-2009 'Construction of buildings in bush fire-prone areas BAL 40.	
b. New construction situated from 32m to <43m from the forested wetland hazard shall comply with Australian Standard AS3959-2009 'Construction of buildings in bush fire-prone areas BAL 29.	
c. New construction situated from 43m to <57m from the forested wetland hazard shall comply with Australian Standard AS3959-2009 'Construction of buildings in bush fire-prone areas BAL 19.	
d. New construction situated from 57m to <100m from the forested wetland hazard shall comply with Australian Standard AS3959-2009 'Construction of buildings in bush fire-prone areas BAL 12.5.	
e. All Class 10 structures as defined per the "Building Code of Australia" attached to or within 6 metres of habitable buildings shall comply with the relevant BAL as per the Australian Standard AS3959-2009 "Construction of buildings in bush	
6. New construction complying with Australian Standard AS3959-2009 'Construction of buildings in bush-fire prone areas BAL 12.5 and BAL 19 shall also undertake the following:	
a. The sub floor space shall be enclosed with either:	
i. a wall that complies with Clause 5.4 of	

Issue raised by NSW Rural Fire Service	Response
<p>AS2959-2009; or</p> <p>ii. a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium; or</p> <p>iii. a combination of the items above.</p> <p>b. Where the subfloor space is unenclosed, the support posts, columns, stumps, piers and poles shall be:</p> <p>i. of non-combustible material; or</p> <p>ii. of bushfire-resisting timber (see AS3959-2009 Appendix F); or</p> <p>iii. a combination of the items above.</p> <p>NOTE: This requirement applies to the principal building only and not to vehandahs, decks, steps, ramps and landings (see Clause 5.7 of AS3959-2009)</p> <p>c. Where the subfloor space is unenclosed, flood material, including bearers, joists and flooring less than 400mm above finished ground level, shall be:</p> <p>i. non-combustible (e.g., concrete, steel); or</p> <p>ii. of bushfire-resisting timber (AS3959-2009 see Appendix F); or</p> <p>iii. particle board or plywood flooring where the underside is lined with sarking-type material or material wood insulation; or</p> <p>iv. a system complying with AS 1530.8.1; or</p> <p>v. a combination of any of the items above.</p> <p>NOTE: There are no construction requirements for elements of elevated floors, including bearers, joists and flooring, if the underside of the element is 400 mm or more above finished ground level.</p> <p>d. In relation to unenclosed verandas, decks, steps, ramps and landings – the support posts, columns, stumps, stringers, pier, poles and framing (i.e. bearers and joists) shall be:</p> <p>i. non-combustible material; or</p> <p>ii. of bushfire-resisting timber (AS3959-2009 see Appendix F); or</p> <p>iii. a combination of any of the items above.</p> <p>e. Parts of handrails and balustrades that are less than 125mm from any glazing or any combustible wall shall be:</p> <p>i. of non-combustible material;</p> <p>ii. of bushfire-resisting timber (AS3959-2009 see Appendix F); or</p> <p>iii. a combination of any of the items above.</p> <p>NOTE: Those parts of the handrails and balustrades that are 125 mm or more from the building have no requirements.</p> <p>f. External framed walls must incorporate either:</p>	<p>It is therefore concluded that increased APZs are not required for the proposed increase in dwelling density (compared with the DA526/08 approval) and child care centre use.</p> <p>The updated bushfire assessment is provided at <b>Appendix G</b>.</p>

Issue raised by NSW Rural Fire Service	Response
<ul style="list-style-type: none"> <li>i. Breather-type sarking complying with AS/NZS 4200.1 and with a flammability index of not more than 5 (see AS 1530.2) and sarked on the outside of the frame; or</li> <li>ii. An insulation material conforming to the appropriate Australian Standard for that material.</li> </ul>	
7. Landscaping to the site is to comply with the principles of Appendix 5 of 'Planning for Bush Fire Protection 2006'.	

### Sydney Water

Sydney Water Corporation made a submission on the exhibited Environmental Assessment dated 13 May 2010. **Table 16** provides a response to the key issues raised in the submission.

Refer to **Appendix M**.

**Table 16. Response to Sydney Water submission**

Issue raised by Sydney Water	Response
<ul style="list-style-type: none"> <li>• <b>Warriewood Sewerage Treatment Plant</b> Any development within 400m buffer area around the Warriewood Sewerage Treatment Plant is required to pay a contribution of \$500,000 per net developable hectare. The developer must enter into a contribution deed with Sydney Water prior to any approvals being granted.  Sydney Water requests that there is no direct line of sight from the units within the development into the Warriewood Sewerage Treatment Plant.</li> </ul>	<p>Correspondence between Sydney Water Corporation and Meriton Apartments Pty Ltd was submitted with the exhibited Environmental Assessment that outlines the agreements in place for contributions towards the Warriewood Sewerage Treatment Plant works.</p> <p>A deed of agreement has been signed between Sydney Water Corporation and Meriton Apartments Pty Ltd for the commissioning of Stage A Works to the Warriewood Valley Treatment Plant. The Stage A works are complete (as noted in the Sydney Water Corporation Letter of 1 July 2010).</p> <p>The contribution of \$3,000,000, relating to the Stage A works are to be paid on the Development Consent date, as outlined in the Deed. This contribution relates the two properties at 3, 7 and 9 Macpherson Street and 14, 16, 18 and 18a Boondah Road, Warriewood.</p> <p>In relation to the potential for views from the residential dwellings within the development into the Warriewood Sewerage Treatment Plant, the proposed development at 3 storeys in height fronting Boondah Road will not have a direct line of sight of the treatment plant.</p> <p>Much of the vegetation within the Treatment Plant site that fronts Boondah Road has dense foliage and has a canopy height in excess of the three storey proposed buildings. It is therefore considered that direct line of sight will be obstructed by vegetation. Taller 4 and 5 storey buildings are set well back from Boondah Road.</p>
<ul style="list-style-type: none"> <li>• <b>Sydney Water Servicing</b> Sydney Water will further assess the impact of the development when the proponent applies for a Section 73 Certificate. At this time, the assessment will enable Sydney Water to specify any works required as a result of the development and if amplification and/or changes to the system are applicable.</li> </ul>	<p>Meriton Apartments Pty Ltd accept the Sydney Water Servicing requirements for a Section 73 Certificate as a condition of consent.</p>

### Department of Education and Training

The Department of Education and Training made a submission on the exhibited Environmental Assessment dated 14 May 2010. **Table 17** provides a response to the key issues raised in the submission. Refer to **Appendix M**.

**Table 17. Response to Department of Education and Training submission**

Issue raised by Department of Education and Training	Response
<ul style="list-style-type: none"> <li>On the basis that the forecast dwelling yield of 600 dwellings, the Department of Education and Training estimates that there could be 42 primary aged children and 36 secondary aged persons from the proposed development.</li> <li>This number of children can be accommodated in the existing local primary school at Narrabeen North Public School and at Narrabeen Sports High School. These sites share the same site being close to the Boondah Road development.</li> </ul>	<p>It is noted that the Department of Education and Training confirm that the estimated number of primary and high school aged children living within the proposed development will be able to attend existing schools in the locality without the need to expand school facilities.</p> <p>The Department of Education and Training do not suggest a need for expanding existing schools or providing new schools in the area to cater for the increased demand a result of the proposed development.</p>



### Sydney Regional Development Advisory Committee (SRDAC)/RTA

The SRDAC made a submission on the exhibited Environmental Assessment dated 18 May 2010. **Table 16** provides a response to the key issues raised in the submission.

**Table 18. Response to SRDAC submission**

Issue raised by RTA	Response
<ul style="list-style-type: none"> <li>The layout of the car parking areas associated with the subject development (including driveways, grades, aisle widths, turning paths, sight distance requirements, and parking bay dimensions) should be in accordance with AS2890.1 – 2004 and AS2890.2 – 2002 for heavy vehicles. All disabled parking spaces shall comply with the requirements of AS2890.6 – 2009.</li> </ul>	<p>Car parking areas will comply with (including driveways, grades, aisle widths, turning paths, sight distance requirements, and parking bay dimensions) should be in accordance with AS2890.1 – 2004 and AS2890.2 – 2002 for heavy vehicles.</p> <p>All disabled parking spaces will comply with the requirements of AS2890.6 – 2009.</p> <p>Refer to revised Statement of Commitments at <b>Section 4</b> of this report.</p>
<ul style="list-style-type: none"> <li>Proposed cycleway is to comply with dimensional requirements of NSW Bicycle Guidelines and be signposted and delineated as per this document.</li> </ul>	<p>Proposed cycleway will comply with dimensional requirements of NSW Bicycle Guidelines and be signposted and delineated in accordance with Council's standards, as approved by Development Consent DA526/08.</p>
<ul style="list-style-type: none"> <li>The RTA requires the 'Warriewood Valley Roads Master Plan (2006 review) to be updated, including the timeline for proposed works. The RTA require further details of proposed works at the following intersections to be submitted to the RTA for review: <ul style="list-style-type: none"> <li>Pittwater Road/Warriewood Road</li> <li>Pittwater Road/Jacksons Road</li> <li>Mona Vale Road/Ponderosa Parade</li> </ul> </li> </ul>	<p>The proposed development is consistent with the Warriewood Valley Roads Master Plan (2006 Review).</p> <p>The proposed works to the nominated intersections do not form part of the proposed works-in-kind that Meriton propose to undertake in lieu of Section 94 development contributions for road works. The proposed development will contribute a minor amount of additional traffic to those nominated intersections.</p> <p>The Traffic Impact Assessment by Halcrow states that:</p> <p><i>"It is noted that the detailed design of the upgrading of the intersection of Mona Vale Road and Ponderosa Avenue to traffic signals has not yet been undertaken, thus the analysis is based on assumptions about the possible future layout. It allows for two through lanes on Mona Vale Road with additional right turn lanes, and two approach lanes on both Ponderosa Parade and Samuel Street. This is consistent with the concept sketch in the Roads Master Plan.</i></p> <p><i>The upgrading of the Pittwater Road signalised intersections are presented in the Roads Master Plan as concept plans only, thus assumptions were made in this analysis. The analyses assume that the cycle length remains the same as existing, with phase times determined by the Sidra Intersection programme. In reality, RTA would be responsible for determining the details of the signal timing. The right turn bays into Jacksons Road and Warriewood Road were assumed to be lengthened to overcome the existing problem with queues overflowing into the through lanes.</i></p> <p><i>The analysis of the proposed roundabout at the intersection of the site access and Macpherson Street assumed a three way intersection only, as the details of the access arrangements for the fourth leg are unknown. The results indicate a good level of service, and thus it is expected that with a fourth leg, the roundabout would also function at a good level of service.</i></p> <p><i>Overall, the results demonstrate that with the potential future developments in Warriewood Valley and the planned upgrades to key intersections, the intersections would operate at satisfactory levels of service".</i></p>

Issue raised by RTA	Response
	<p>The Traffic Impact Assessment also states that:</p> <p><i>“Assuming all the potential development in Warriewood Valley occurs, the nominal maximum traffic volumes based on their hierarchical classification would be exceeded on Garden Street, Macpherson Street, Ponderosa Parade, Jubilee Avenue and Warriewood Road. However, the already planned upgrades to intersections would satisfactorily accommodate the peak hour traffic”.</i></p>
<ul style="list-style-type: none"> <li>The proposed roundabouts at the intersections of Boondah Road / Macpherson Street, the new site access/Macpherson Street and Jacksons Road/Boondah Road should be installed at Stage 1 prior to the occupation of the site.</li> </ul>	<p>It is proposed to undertake the intersection upgrade works to Boondah Road/MacPherson Street and new access street/MacPherson Street and Boondah Road/Macpherson Street will be undertaken by Meriton Apartments in accordance with the Warriewood Valley Roads Master Plan as part of the Stage 1 Project Approval.</p> <p>Refer to the revised Statement of Commitments at <b>Section 4</b>.</p>
<ul style="list-style-type: none"> <li>All works/regulatory signposting associated with the proposed development shall be at no cost to the RTA.</li> </ul>	<p>Noted.</p>

### 3.3 Pittwater Council

Pittwater Council made a submission on the exhibited Environmental Assessment. **Table 16** provides a response to the key issues raised in the submission.

Given the size of Council's submission a copy has not been appended to this report. It is understood that the Department of Planning have a copy.

**Table 19. Response to Pittwater Council submission**

Issue raised by Pittwater Council	Response
<b>EQUITY AND PRECEDENT</b>  Development should be responsive to and in accordance with the framework of applicable strategic planning documents.  Concern that the proposal will set a precedent for Warriewood Valley.  Development would result in an unfair commercial advantage to Meriton.	The proposed development responds to the capacity of the site and the local area to accommodate an increase in the number of dwellings that Council's Warriewood Valley Planning Framework 2010.  It is understood the Department of Planning are undertaking a review of the existing planning framework applying to the subject site and other sectors and buffer areas in the Warriewood Valley and the capacity to accommodate additional dwellings.
<b>DEPARTURE FROM THE ORDERLY PLANNING PROCESS</b>  The proposal is inconsistent with the NSW Metropolitan Strategy and North East Subregional Strategy in terms of residential dwelling targets and employment generating development targets.  The proposal will upset the balance between residential and employment generating land uses.  Need to provide additional employment generating land uses as a result of increased population proposed with this development.	It is not necessarily the case that additional employment generating uses need to be created as a result of increased residential population. A range of factors will determine the availability of employment and peoples choices to work within Pittwater.  An analysis of the types of employment currently available in Pittwater, the locations where additional jobs can be provided. This analysis is beyond the scope of this Preferred Project Report. It is considered that Department of Planning will consider the strategic objectives for accommodating additional dwellings as well as employment opportunities for those residing in the subject development and surrounding development.  It is however considered that providing additional housing will support the employment growth in the locality, in a range of industries including construction, as well as providing ongoing services for local residents.
<b>INADEQUATE PROVISION OF COMMUNITY INFRASTRUCTURE AND SERVICES</b>	
<b>Local infrastructure and services</b>  Council recommend a review of the strategic land use and Infrastructure and Services planning carried out for Warriewood Valley accounting for the Meriton proposal.  The proposal will place further load on existing facilities including active open space. Provision of additional active open space is required.	A response to the key issues of availability of infrastructure to support the existing. Planned and additional population in Warriewood Valley is provided in response to the public submissions in Section 3.5 of this report.  It is understood the Department of Planning are undertaking a review of the existing planning framework applying to the subject site and other sectors and buffer areas in the Warriewood Valley and the capacity to accommodate additional dwellings.  The landscape design of proposed common open spaces has been amended in the Preferred Concept Plan and Stage 1 Preferred Project has been amended to enable additional recreational activities.  These additional activities include: <ul style="list-style-type: none"> <li>▪ Fitness and exercise equipment in one of the pocket parks;</li> <li>▪ Children's play equipment at the main entry to the swimming</li> </ul>

Issue raised by Pittwater Council	Response
	<p>pool centre; and</p> <ul style="list-style-type: none"> <li>Additional open lawn area in the central park of 900m2 for children to kick a ball and run around.</li> </ul> <p>These additional facilities are provided in the subject site directly related to the proposed development, which is more appropriate approach than developing new open spaces outside of the Warriewood Valley.</p>
<p><b>Utilities</b></p> <p>The proposal does not provide utility services to a standard commensurate with contemporary development to the full cost of Meriton.</p>	<p>All necessary utility services are proposed to be provided to the site for the Meriton development.</p>
<p><b>Capping of Warriewood Sewerage Treatment Plant</b></p> <p>Meriton's contribution per dwelling for capping the STP should be equitable and based on the proposed increase in dwellings.</p>	<p>A development agreement between Sydney Water Corporation and Meriton Apartments Pty Ltd established a set contribution for the Stage 1 capping of the STP. These works are now complete and it is understood the contribution is to be paid on the date of determination of this application.</p> <p>Refer to correspondence from Sydney Water Corporation submitted with the Environmental Assessment.</p>
<b>Amenity</b>	
<p><b>Amenity internal to the site</b></p> <p>Encroachments into front building setbacks to Macpherson Street and the internal roads will affect the internal living environment of those buildings.</p>	<p>The proposal complies with the minimum 6. metre setbacks to Macpherson Street.</p>
<p>The orientation of dwellings within buildings will incur noise impacts as the noise-sensitive rooms (i.e. bedrooms) are located adjacent to common open space, transitional areas or carpark exhaust o ait supply. This is applicable to Building D.</p>	<p>It is appropriate urban design and residential design practice to orient some bedrooms onto open spaces. The Preferred Project has amended the internal configuration of some units so that more units have living rooms and primary outdoor spaces oriented with the northerly aspect for direct sunlight access.</p> <p>Car park exhaust are considered to be adequately separated from residential dwellings.</p>
<p>Separation distances between buildings is at a minimum of 9 metres and there is an opportunity into adjacent dwellings.</p>	<p>The heights of some opposing buildings where separation distances were raised as concerns have been reduced. The proposal is now compliant with the RFDC separation distance requirements.</p>
<p>Sun light access to the dwellings is deficient with many having single aspect to south west.</p>	<p>The Preferred Project has amended the internal configuration of some units so that more units have living rooms and primary outdoor spaces oriented with the northerly aspect for direct sunlight access.</p>
<p>Private open space to many dwellings is insufficient for their utility and many face south and south west.</p>	<p>As above, the proposal complies with the minimum requirements of the RFDC for direct sunlight access to living rooms and primary private open space.</p> <p>The Preferred Project has been amended to provide more usable private open space.</p>
<p>Insufficient opportunities for landscaping in private open spaces. This will impact the amenity of future</p>	<p>Ground Level apartments have courtyard spaces. These spaces are considered to provide adequate usable spaces and allow for tables</p>

Issue raised by Pittwater Council	Response
residents.	and seats and BBQ facilities for outdoor entertaining. Additional areas of common open space has been provided in the Preferred Project Report by deleting a private road between Buildings A/B/C and D/E. Additional soft landscaping is proposed which will enhance the amenity of the ground level courtyards fronting this space.
<p>Opportunities for safe, secure area for children's play or social interaction amongst residents may result in noise disturbance.</p> <p>Overshadowing, wind effects and noise from surrounding buildings detract from the utility of this space as a potential recreational, common area for residents.</p> <p>Triangular common open space does not provide opportunities for recreation given the building is surrounded by dwellings and due to the lack of landscape quality.</p>	<p>The proposed central park has been amended to include additional open lawn areas to improve the utility of the space. It is appropriate practice to orient buildings onto open spaces and apartments should be configured with the orientation overlooking open spaces to promote surveillance.</p> <p>The central open space will have good amenity and will be an active space for children's safe play. Large areas of the central park will be in sun throughout the year including during mid winter.</p>
<p>The Stage 1 project application is deficient in 59 on-site visitor car parking spaces, which can not be accommodated within the main internal road and will affect the amenity of residents.</p> <p>No car wash bays are proposed.</p> <p>No provision for removalist trucks are proposed.</p>	<p>The Stage 1 Preferred Project has been amended to provide 42 car parking spaces for visitors (1 space per 7 dwellings). This visitor parking provisions in line with the RTA Guide to Traffic Generating Development, being 1 space per 5-7 spaces.</p> <p>Car wash bays are to be considered in the detailed documentation phase prior to the issue of a Construction Certificate.</p> <p>The provision for large rigid removalist trucks is provided for on street. The through locate street is designed to accommodate removalist trucks, with parking on the street.</p>
<p>The internal road is not sufficient to cater for the amount of traffic generated by the 600 dwellings.</p> <p>The proposed 600 dwellings will result in increased traffic congestion within the site, leading to adverse amenity impacts on residential of the development.</p>	<p>Halcrow Traffic and Transport Consultants for the project have reviewed the proposed local road design and concluded that the design will be able to cater for the proposed 559 dwellings. Refer to report at <b>Appendix I</b>.</p>
<b>Amenity external to the site</b>	
<p><b>Height of buildings and visual impact</b></p> <p>The height of the proposed development combined with the extent of cut and fill on site means that the buildings will dominate the streetscape along Macpherson Street (and later, Boondah Road). The development will be highly visible in the surrounding area and become the dominant feature in the skyline.</p>	<p>The proposal for 3 storeys along the McPherson Street and Boondah Road frontages is considered appropriate with building setback in accordance with Council's DCP controls. The taller 4 and 5 storey buildings are set well back from the public domain, beyond the 3 storey streetscape. Only glimpses of the taller buildings will be available between the 3 storey streetscape.</p> <p>Some of the buildings have been reduced in height to provide a improved transition in scale within the site and to surrounding areas.</p>
<p><b>Traffic issues</b></p> <p>A shortfall of 59 visitor car spaces is proposed.</p> <p>The internal main road through the site is insufficient to cater for the amount of traffic generated by the 600 dwellings and does not have the capacity to provide the necessary kerbside parking.</p> <p>This shortfall in visitor parking will place greater pressures on kerb-side parking on Macpherson Street, Boondah Road and adjoining streets and will adversely</p>	<p>The Stage 1 Preferred Project has been amended to provide 42 car parking spaces for visitors (1 space per 7 dwellings). This visitor parking provisions in line with the RTA Guide to Traffic Generating Development, being 1 space per 5-7 spaces.</p> <p>It is considered there is adequate on-street visitor parking spaces in addition to the on-site spaces to cater to the demand.</p> <p>Halcrow Traffic and Transport Consultants for the project have reviewed the proposed local road design and concluded that the design will the able to cater for the proposed 559 dwellings. Refer to</p>

Issue raised by Pittwater Council	Response
affect the amenity of existing and future residential of the area.	report at <b>Appendix I</b> .
<b>Infrastructure provision</b> The proposed development will result in increased demand for active open space. The proposal does not address the demand for active open space.	The changes in the Preferred Project in response to concerns about the utility of open space provided on site and the demand for additional activate open space have been addressed previously in this report.
<b>COMMUNITY EXPECTATIONS AND PARTICIPATION</b> Community expectations are based on Council's vision for Warriewood Valley expressed in the original planning strategy and in the current strategy entitled <i>Warriewood Valley Planning Framework 2010</i> . The Meriton proposal varies widely form the community expectation for development of the site.	The proposed development responds to the capacity of the site and the local area to accommodate an increase in the number of dwellings that Council's Warriewood Valley Planning Framework 2010. It is understand the Department of Planning are undertaking a review of the existing planning framework applying to the subject site and other sectors and buffer areas in the Warriewood Valley and the capacity to accommodate additional dwellings.

### 3.4 Rob Stokes Pittwater MP

Rob Stokes, Pittwater MP made a submission on the exhibited Environmental Assessment dated 16 June 2010 which included two speeches to the NSW Parliament as well as copies of various newspaper articles. **Table 20** provides a response to the key issues raised in the submission.

Given the size of the Rob Stokes MP submission a copy has not been appended to this report. It is understood that the Department of Planning have a copy.

**Table 20. Response to Rob Stokes Pittwater MP**

Issue	Response
<ul style="list-style-type: none"> <li>Size, bulk and scale</li> </ul>	<p>The Preferred Concept Plan and Stage 1 Project Application incorporate changes that address issues raised in relation to the size, bulk and scale of development including:</p> <ul style="list-style-type: none"> <li>Reduction in the number of dwellings from 600 to 559,</li> <li>Reduction in the height of buildings E and F to part 4 and part 5 storeys, and</li> <li>Reduction in the height of Buildings K and M from 5 storeys to 4 storeys.</li> </ul>
<ul style="list-style-type: none"> <li>Impact on established character of locality</li> </ul>	<p>The character of the local area is in transition to a medium density neighbourhood. Since the 1990s Warriewood Valley has been planned for urban development. The site has been identified as having a high capacity to accommodate development.</p>
<ul style="list-style-type: none"> <li>Lack of sufficient capacity of local infrastructure (roads and transport)</li> </ul>	<p>The proposed developed has adequate infrastructure to support the proposed increase in dwellings. The capacity of existing infrastructure is addressed in response to similar concerns raised in public submissions in the following sections of this report.</p>
<ul style="list-style-type: none"> <li>Inequality</li> </ul>	<p>The Department of Planning are currently reviewing the Warriewood Valley Planning Framework to determine the capacity of the area for increased housing beyond Council's 2010 housing strategy.</p>
<ul style="list-style-type: none"> <li>Recommends the Planning Assessment Commission to be the Consent authority</li> </ul>	<p>It is understood that the Minister for Planning will make a determination as to whether the Planning Assessment Commission will be delegated the Minister's functions as the Consent Authority.</p>

### 3.5 Public submissions

This section of Preferred Project Report provides a summary of the key issues raised in the public submissions, provides a response and where an appropriate a description as to how the Preferred Project has been amended in response to these issues.

A total of 519 public submissions were received by the Department of Planning during the exhibition period. Copies of all submissions were provided to the Proponent, in order that issues raised could be addressed in the Preferred Project. **Table 21** provides a summary of the submissions received during the exhibition period, which have been considered in preparing this Preferred Project Report.

This issues were correlated by the Department of Planning and a response in order of the highest number of occurrences an issue was raised to the lowest is provided. Given the number of public submissions copies have not been appended to this report. It is understood that the Department of Planning have a copy.

**Table 21. Summary of public submissions**

Issue	Exhibition
1. Out of character with locality	355
2. Increase in traffic	312
3. Increased stress on existing infrastructure	303
4. Inappropriate height	214
5. Inappropriate density	189
6. Insufficient car parking on site	176
7. Inconsistent with Council's controls	132
8. Lack of public transport	127
9. Impact on existing health services	97
10. Impact on natural environment	92
11. Insufficient development contributions	84
12. Potential to set precedent	81
13. Insufficient open space	75
14. Greed of developers *	42
15. Site subject to flooding	37
16. Lack of education facilities in the area	37
17. Visual impact	33
18. Noise impacts due to increased density	32
19. Over population/over crowding of the area	28
20. Removal of green space	25
21. Impact on access	24
22. Surrounding road subject to flooding	23
23. Impact on STP	17
24. Increase in crime	16
25. Visual bulk	11
26. Devaluation of existing property	10
27. Lack of child care facilities in the area	10
28. Rainwater harvesting required	9
29. Impact on water	6
30. Insufficient notification area	4
31. Pittwater LGA requires higher densities	4
32. Lack of seniors housing for future	3
33. Concern over tenants in retail	3
34. Should provide low cost housing	2
35. Solar energy should be required	1

**Note to Table \*:** Comments in some public submissions about the perception of greed are not considered to be relevant planning matters and therefore a response is not provided in this Preferred Project Report.



### Out of character with locality

Many public submission raised concern that the scale and density of the proposed development is in appropriate for Pittwater and the local area. Comments in submissions included:

- *“The proposed development is entirely inappropriate for the Pittwater area which on the whole has minimal high density development”.*
- *“I don’t think the height of the buildings fit in with the character of the area”.*
- *“The development will be totally out of character with the area given that it includes 3 and 5 storey buildings, when the average dwelling currently is single and double storey only”.*
- *“A five storey development does not suit the neighbourhood and the area has never been planned for such high development”.*
- *“The proposal is out of character with the local area’s current densities and height. The subject site is located at a high point within the Warriewood Valley and will overlook the surrounding dwellings and wetlands area”.*
- *“The high rise s not in keeping with the area”.*

### Response:

The Warriewood Valley has been identified as an urban release area since the early 1990s. The area has been undergoing a transition for medium density development and as such the character is undergoing change.

Development in the Anglican Retirement Village to the north is 3 storeys with a high pitched roof, which is equivalent to 4 storeys. The proposed 4 and 5 storey buildings are set well back from the street frontages and only glimpses of these buildings will be available from Macpherson Street and Boondah Road. Some of the 5 storeys building have been reduced to 4 storeys, which provides an appropriate transition in scale.

### Increase in traffic

The increase in traffic to the local and regional road system was raised in many submissions. Comments included:

- *“The increase in traffic on Pittwater Road, Mona Vale roads is very congested now, it is almost impossible to get out of the area on weekends and peak periods and the increase in traffic from 600 units would cause a grid lock of traffic. Pittwater Road leading on to Wakehurst Parkway and Mona Vale Roads are the only main roads to take you out of this area. There are times now, because of all the development, where our family simply cannot access these roads at peak times due to the lengthy delays with blocked traffic”.*
- *“The effect on traffic in Macpherson Street has been considerably understated in the report. The addition of 600 units would almost triple the potential usage of Macpherson Street, which would bear the brunt of all traffic to the west and Mona Vale Road”.*
- *“Traffic in the area is now almost at capacity with only two roads heading towards the south (i.e. Pittwater Road and the Wakehurst Parkway, and one road west-Mona Vale Road”.*
- *“The impact to both our major roads (Mona Vale Roads and*

*Wakehurst Parkway) which are already over-congested during peak hours would be too great".*

- *The traffic has already become horrendous and with further developments this will only get worse".*
- *The roads around the area have not been designed and built to handle this increased traffic flow. Trying to get out of the area through Mona Vale Road and Wakehurst Parkway of a weekday morning is already ridiculous, there is no room or time for additional cars".*
- *Mona Vale Road our route to the west, is single-lane for nearly 10km, constantly blocked by the volume of traffic, with no funds budgeted in the near future for an upgrade. Wakehurst Parkway to the southwest is also single-lane and a bottle-neck every weekday morning".*
- *The approach roads to the site, Macpherson Street, Warriewood Road and Garden Street) are all narrow and pot-holed and in need of repair".*

#### **Response:**

Traffic and Transport Planning Consultant's Halcrow have prepared an updated Traffic Assessment for the Preferred Project. In relation to Traffic impact, Halcrow's assessment concludes that the proposed residential development would not significantly increase traffic volumes or delays on the road system of Warriewood Valley above those previously expected and planned for in the Roads Master Plan. The proposed access arrangements are considered satisfactory and are consistent with the approved development for the site.

The Halcrow results indicate that the additional traffic would not significantly increase traffic on roads within the Warriewood Valley. The distribution of additional traffic is provided in Table 4.1 showing future peak hour traffic on key roads within Warriewood Valley.

In relation to the impact of the proposed additional traffic generated by the proposed development on intersections within the Warriewood Valley and intersection with key regional roads serving the area, the additional traffic generated by the development has been added to the traffic counts at intersections. This analysis has assisted in understanding the impact of the proposed additional traffic on the future intersection operating conditions. Refer to Table 4.2 of the Halcrow report at **Appendix I**. The analysis of intersections includes the following intersections:

- Warriewood/Pittwater
- Boondah/Macpherson
- Macpherson/Warriewood
- Macpherson/Ponderosa
- Garden/Macpherson
- Boondah/Jacksons
- Jacksons/Pittwater
- Jubilee/Ponderosa
- Ponderosa/Monas Vale
- Site Access/Macpherson
- Site Access/Boondah

The results of the intersection analysis assumes that all of the intersection upgrades under the Roads Master Plan will occur. The results show that the additional traffic generated by the proposed development would have

only a very minor impact on the operating conditions at the key intersections. Only the intersection of Warriewood Road and Pittwater Road will change from a Level B service to a Level C service using the Sidra Intersection assessment tool. The levels of services of all other key intersections assessed will remain at the same levels of services that was considered acceptable by Pittwater Council in the preparation of the Roads Master Plan having regard to all potential development in the Warriewood Valley

The Halcrow report states that:

*“The average delays experienced by drivers would increase only marginally at the surveyed key intersections, with most increasing by less than one per second per vehicle”.*

The Halcrow report goes on to conclude that:

*“No additional upgrades to the intersections would be warranted by the additional traffic expected to be generated by the proposed development”.*

### **Increased stress on existing infrastructure**

- *“The infrastructure of the valleys as is currently available cannot support this number of new dwellings – this is true for schools, sporting facilities, roads, child care, shopping etc and most importantly public transport”.*
- *“Existing infrastructure will not cope-where are funds to come from to fix”.*
- *“Not enough funds for infrastructure”.*
- *“Have demands on hospitals, schools, policing been fully considered”.*
- *“How will Mona Vale or even Manly Hospital cope within the increased population”?*
- *“Insufficient funds assigned to the infrastructure in this area”.*
- *‘As the government is also considering closing the local Mona Vale Hospital and has already closed the maternity ward, the other closest hospitals (Manly & Hornsby) cannot handle the already overloaded health system. Manly is in serious need of upgrading as are most hospitals in NSW, and the proposal for a new hospital at Frenches Forest has stalled, and also does not have the infrastructure required to support it”.*
- *Warriewood Medical Centre patients experience a wait of on average of around two hours in order to see a doctor. This facility has recently been moved to Mona Vale. Further residents will only put more strain on the very new Medical Centres available in our area”.*
- *“Very little funds are used to upgrade roads and facilities in our area”.*
- *Much of Warriewood Road does not have curbing or footpaths, so we can not expect there will be more funds available for further infrastructure”.*

### **Response:**

Many of the submissions raised concern about the provision of adequate infrastructure to cater for the increased population in the Warriewood Valley generally as well as the subject site, specifically. Specifically infrastructure mentioned in submissions includes:

- Schools
- Hospitals and medical centres
- Roads
- Public transport
- Footpaths and curb and guttering
- Sporting facilities

In response, this infrastructure is discussed in further detail below:

#### *Schools*

We note that the NSW Department of Education and Training wrote to the Department of Planning about the proposed development. The NSW Department of Education states in their submission that:

*“On the basis that the forecast dwelling yield of 600 dwellings, the Department of Education and Training estimates that there could be 42 primary aged children and 36 secondary aged persons from the proposed development.*

*This number of children can be accommodated in the existing local primary school at Narrabeen North Public School and at Narrabeen Sports High School. These sites share the same site being close to the Boondah Road development”.*

It is noted that nearby primary and secondary schools have adequate capacity to accommodate the projected increased in school aged children from the proposed development.

#### *Hospitals and medical centres*

The NSW Government controls spending on public hospitals. It is considered that increasing population in areas such as Warriewood Valley will give greater emphasis on the need to maintain and improve hospitals and medical facilities and ensure these facilities are adequately staffed.

#### *Roads*

The Roads Master Plan (2006 review) identified planned upgrades to infrastructure in the Warriewood Valley area in response to planned development. These include the following of relevance to the proposed development:

- Roundabout at Boondah Road and Macpherson Street.
- Roundabout at Garden Street and Macpherson Street.
- Roundabout at Warriewood Road and Macpherson Street.
- Roundabout at Macpherson Street and Brands Lane (access to Sector 11).

- Roundabout at Boondah Road and Jacksons Road.
- Realignment of intersection of Warriewood Road and Macpherson Street.
- New signals at Mona Vale Road and Ponderosa Parade.
- Upgrade intersection of Warriewood Road and Pittwater Road.
- Upgrade intersection of Jacksons Road and Pittwater Road.
- Warriewood Road pavement correction and strengthening.
- Macpherson Street widening Boondah Road to Warriewood Road.
- Boondah Road upgrade, widen and raise above floor level.
- Macpherson Street bridge at Narrabeen Creek – two lane bridge plus approaches plus shared pedestrian/cycle path on both sides.
- Boondah Road bridge at Narrabeen Creek – two lane bridge plus shared pedestrian/cycle path on both sides.
- Pedestrian refuge in Boondah Road.
- Pedestrian refuge in Macpherson Street between Brands Lane and Boondah Road.
- Two bus bays in Macpherson Street near Boondah Road.

Pittwater Council is responsible for implementing the Roads Master Plan. The timing of these works is dependent on development occurring. Meriton propose the following works to the local road network, associated with the proposed development:

- Roundabout at intersection of new access road and Macpherson Street;
- Road widening of Macpherson Street;
- Undergrounding of existing services along Macpherson Street (high voltage, low voltage and cable television);
- Roundabout at intersection of new access road and Boondah Road;
- Round about at intersection of Macpherson Street and Boondah Road;
- Road widening of Boondah Road; and
- New Public Road through the site.

### *Public transport*

The timing of public transport and road improvements are to be determined by Sydney Buses and Pittwater Council. The proposed development offers an opportunity to provide a higher levels of bus services in Warriewood Valley. It is usual practice in metropolitan Sydney for additional bus services to follow demand generated by increased population. There needs to be a demonstrated demand from new residents for additional transport services.

Sydney Buses were consulted by the Department of Planning in the preparation of the Director General's Requirements. The Sydney Buses submission, included in the exhibited Environmental Assessment, states that:

*"This development offers the opportunity to provide a higher level of service in Warriewood, these levels can be reviewed once the development has been completed".*

The transport management measures proposed in the Halcrow Traffic and Transport Assessment Report at **Appendix I**, states that:

*“The already planned upgrades and improvements to the transport infrastructure of Warriewood Valley would satisfactorily accommodate the anticipated development in the area, and the additional traffic generated any the subject development. The measures identified in the Warriewood Valley Roads Master Plan (2006 review) are therefore recommended, with the timing to be determined by Pittwater Council”.*

*It is recommended that Sydney Buses review service levels any infrastructure changes required to encourage public transport use on completion of the development”.*

#### *Footpaths and curb and guttering*

Upgrades to footpaths, and curb and guttering is generally undertaken as a condition of development consent for developments with public road frontages prior to the Occupation Certificates for buildings fronting the reconstructed roads. Developers are normally required to upgrade their street frontages of development sites. The Warriewood Valley Roads Master Plan (2006 review) outlines the requirements for street and footpath upgrades. The timing of these upgrades is dependent on the rate of development and enforcement of development conditions by Pittwater Council.

The street frontage of Macpherson Street and Boondah Road s to be upgrade as part of the development of the subject site. It is also noted that a new public road will be built by Meriton through the site and dedicated to Council.

#### *Sporting facilities*

The Warriewood Valley Landscape Master Plan includes plans for upgrading existing sporting facilities and providing additional sporting facilities. Section 94 contributions levied by Council for proposed developments contribute to the upgrading of existing sports facilities as well as providing new facilities. Pittwater Council determines where and when moneys are to be spent.

Meriton propose monetary contributions to be paid with the progressive development prior to the issue of Construction Certificates for the residential buildings.

#### **Inappropriate height**

- *“A 3-5 storey development is too high for the area. 2 storey developments are the character of the area, so this development would be out of character”.*
- *“The inclusion of 5 storey blocks is completely out of character with the rest of the development in the valley, which is predominantly two storey, with a few 3 storey blocks in the Anglican Retirement Village on the opposite site of Macpherson Street, set well back from the road”.*
- *“I do not want to see 3 to 5 storey buildings crowding our skyline”.*
- *The landscape and area around Warriewood Valley does not suit a 3-*

*5 storey building, is too high and out of character for the area”.*

- *The planned 3-5 storey buildings are far too high for the area and are completely out of character with the surrounding buildings and environment. We don't want to end up like Dee Why and St Ives which is a travesty”.*
- *Warriewood has no other multi building complexes that have this number of levels. Such a development will be an eyesore which could be seen from a significant distance, due to the surrounding features. The Warriewood/Mona Vale area is very popular with locals for its beautiful trees and surrounding national parks and beaches. Buildings of this size would destroy this appeal, reduce the value of surrounding properties and if approved would lead the way for further approvals of this size. This development is seriously oversized for this area”.*

### **Response:**

The Preferred Concept Plan and Stage 1 Preferred Project include reductions in the height of Buildings E and F from 5 storeys to Part 4 and Part 5 storeys. In the Stage 2 area of the Preferred Concept Plan Building K and M has been reduced in height from 5 storeys to 4 storeys. The proposed reductions in height have been brought about as a result of concerns with the separation distances between buildings could result in undesirable overlooking and loss of visual privacy between units in opposing buildings. The revisions to the heights of buildings bring the Preferred Project into conformance with the NSW Residential Flat Building separation distances.

The reduction in heights of buildings will also provide a benefit of introducing additional variation on scale of buildings and their massing, providing greater visual interest when viewed from within the site and surrounding streets and reduce the overall building bulk.

It is considered that 3 storeys is an appropriate height for buildings fronting Macpherson Street and Boondah Road. Taller buildings of 4 and 5 storeys are appropriately located and set back from the street frontages beyond the 3 storey buildings and fronting onto the areas of highest amenity on the site, being the public and common open space and Warriewood Wetlands.

The aged care development on the northern side of Macpherson Street has some 3 storey buildings with pitched roofs, which is equivalent to height of 4 storeys.

The proposed height of buildings is considered appropriate in the context of surrounding development, and the landscape character. A large portion of the site (57%) does not have any development and has been preserved as an open space corridor fronting the Warriewood wetlands. Additional open space in the form of common opens pace is created for future residents which requires an increase in building height above the approved 2 storey development.

### **Inappropriate density**

- *“This is a gross over development of the land available to Meriton. 4 times the size of what Council and residents want and is fitting for the Warriewood area”.*
- *Warriewood is not the inner City - leave high-rise out of the Valley”.*
- *Pittwater Council have approved a yield of 180 units for this site (plus Macpherson Street is included in the proposal. Meriton’s proposal is for 600 Units, a 333% increase! This is a blatant gross over development of this site”.*

### **Response:**

The Preferred Concept Plan seeks approval for 559 dwellings in two (2) stages. A total of 56,736.6m<sup>2</sup> of GFA is proposed. The site area is 81,180m<sup>2</sup> (8.118 Ha). This equates to an FSR of 0.69:1 is proposed.

A FSR density of 0.69:1 is considered appropriate having regard to the availability of urban services and facilities available for the site. A response to concerns about the lack of adequate public services and facilities including health/medical, roads, public transport, education and open space is provided elsewhere in this report.

The proposed density is comparable with other medium density areas in Metropolitan Sydney, which are similarly located with bus transport access. For instance medium density areas in Sutherland LGA on Sydney’s southern fringe allow for FSR densities of up to 0.7:1.

### **Insufficient car parking on site**

- *“The parking in this area is already appalling in this application there is not enough parking”.*
- *“Parking in Mona Vale and Warriewood is already a problem with not enough spaces and adding at least another 600 cars (or maybe 1200 in case of 2 car families) would make matters far worse. In fact we don’t now where people would park to do their shopping and business unless far more car parks were built”.*
- *The 1 and 2 bedroom units – which make up the greater percentage of units – are only required to have 1 parking space per unit. When each unit will have 2 cars, this means the surrounding streets will be over run by parked cars making the surrounding areas overcrowded, dangerous and unsightly”.*
- *“There is already a shortage of parking in the local area and this development will only exacerbate the current parking shortage”.*
- *Parking in the area is already hard to come by. With only one space allocated to one dwelling (seriously, how many family cars are there these days?) these cars will have to be parked on the surrounding streets, increasing congestion even more on these inadequate roads. Imagine weekends when sport is being played down at the Boondah fields – total chaos”.*



**Response:**

**Section 2** of this report describes the proposed car parking associated with both the Preferred Concept Plan and Stage 1 Preferred Project.

**Table 22** provides a summary of proposed car parking.

**Table 22. Car parking provision**

Car parking	Stage 1	Stage 2	Total
Resident	429	402	831
Visitor	42	27	69
Child care	8		5
<b>Total</b>	<b>479</b>	<b>429</b>	<b>908</b>

The exhibited Environmental Assessment scheme proposed 352 car spaces in the Stage 1 development. An increase of 127 car spaces is proposed through the provision of additional resident and visitor parking. Providing additional resident parking spaces will minimise the incidence of residents parking in surrounding streets.

Pittwater Council's DCP 21 sets out requirements for the provision of car parking for various types of development, which applies to multi-unit housing (three or more dwellings) and two and three storey residential flat buildings. The proposal comprises 3 to 5 storey buildings, and thus does not strictly satisfy the DCP definition for which car parking requirements apply.

For other development types not specifically addressed in the DCP, Pittwater DCP 21 indicates that the minimum number of parking spaces should be determined using appropriate guidelines for parking generation and servicing facilities based on the RTA Guide to Traffic Generating Development or analysis drawn from surveyed data for similar development uses.

The provision of resident parking has been reviewed with regard to the RTA Guide to Traffic Generating Development, which distinguishes between medium and high density residential flat development.

The proposed development exceeds both the RTA car parking requirements for medium density residential developments, and the surveyed demand for residential parking determined by the 2006 Census.

Visitor parking provided at a rate of 1 space per 7 dwellings is consistent with the RTA Guide to Traffic Generating Development of 1 space per 5-7 dwellings.

### **Inconsistent with Council's controls**

- *"Pittwater Council has approved a yield of 180 units for this site (plus Macpherson Street as included in the proposal). Meriton's proposal is for 600 units, a 333% increase. This is a blatant gross over development of this site".*
- *"The development is four times the size of the development proposed by Pittwater Council and supported by local residents".*
- *"Pittwater Council has been very responsible in the way it has overseen the opening up of Warriewood Valley. It has progressed slowly, allowing housing gradually and creating open spaces, pedestrian paths and playgrounds to follow housing. It would be a disaster for the residents of Warriewood if control is taken from Pittwater Council to allow Meriton's huge estate".*
- *"The increase in dwellings proposed by Meriton is clearly in excess of what the people of Pittwater consider to be in the interests of the community".*
- *"The Pittwater Council Warriewood Valley plan attempts to provide a balance of options which should be allowed to be implemented and not changed at the whim of a developer".*
- *"These proposed unit blocks are not consistent with the residential development currently in the valley, or the desired character of the valley as described in the Pittwater 21 Development Control Plan".*
- *"This development will exceed Pittwater Council's height limit of 8.5 metres. All other residential developments in the valley have conformed to the two storey height limit, but this will exceed it by so much that it will dominate the Valley".*
- *The current Warriewood Valley residential development has been carried out in a planned way, guided by environmental, demographic and land capability studies. The proposed unit blocks are not consistent with the current development or the desired character of the valley as described in the Pittwater 21 Development Control Plan".*

### **Response:**

A response to the issues raised above is provided in the response to the Pittwater Council's submission earlier in this section of the report.

### **Lack of public transport**

- *"One bus, every ½ hour, in a north/south direction only. It is inadequate to say the least".*
- *Local public transport infrastructure is sufficient and already overcrowded with standing room only available during peak times".*
- *Our Pittwater area already suffers from poor public transport options and the Meriton Development proposal of 600 units and the extra cars this will bring will only further compound this problem".*
- *"The local infrastructure, from schools to buses & "park and ride" stations, will be unable to cope with the hundreds more residents. At the Warriewood "park and ride" it is nearly impossible to set a parking spot now and the bus trip in the morning is already standing room only".*

- *“Warriewood Valley and the whole of Pittwater rely on a bus service that is focused on the north south routes using Pittwater Road. It is not adequate for the existing communities, let alone the hundreds more generated by this development. Responding to demand by providing more buses will only cause more chaos at the Sydney end as already in peak hour buses crawl along, bumper to bumper from Neutral Bay to York Street and bank up waiting to discharge passengers at Wynyard”.*

#### **Response:**

The timing of public transport improvements in the local area is determined by Sydney Buses. As stated above the proposed development offers an opportunity to provide higher level of bus services in Warriewood Valley. It is usual practice in Sydney for additional bus services to follow demand generated by increased population. There needs to be a demonstrated demand from new residents for additional transport services.

Sydney Buses were consulted by the Department of Planning in the preparation of the Director General’s Requirements. The Sydney Buses submission, included in the exhibited Environmental Assessment, states that:

*“This development offers the opportunity to provide a higher level of service in Warriewood, these levels can be reviewed once the development has been completed”.*

Existing bus services to Central Sydney are operated in accordance with timetables set by Sydney Buses. As noted above, Sydney Buses propose to review bus service levels as a result of the development and increased residential density and population.

As part of this review it is recommended that Sydney Buses consider buses arriving and departing at the Central Sydney bus exchange. Future planning for new bus services should make more efficient use of bus services, the frequency of buses and the location of bus routes to avoid congestion to promote the flow of buses to their destinations.

It is outside the scope of this Preferred Project Report to address existing and potential future public transport services to Warriewood Valley. It is the responsibility of Sydney Buses to plan bus services in response to demand created from planned population growth.

#### **Impact on existing health services**

- *“Will the residents of the proposed large development be able to access Mona Vale Hospital including the Maternity Unit?”*
- *“Our neglected hospitals are already over burdened”.*
- *“Mona Vale hospital seems to be under constant threat of services being reduced (the latest required a fight by residents to retain maternity services). It is clearly irresponsible to permit high density development the face of threats of reduced hospital services”.*
- *“The lack of funding for Mona Vale Hospital means it can’t service the existing population. This consideration along should sink the excessive proposal”.*

**Response:**

The State Government is responsible for funding public hospital including Mona Vale Hospital. Enhancing existing hospital facilities and services is supported to cater for existing as well as future residents needs.

**Impact on natural environment**

- *"We are concerned for the Warriewood Wetlands especially the possibility of pollutants getting into the creeks that run into the wetlands".*
- *"There would also be a potentially adverse impact on the Warriewood wetlands – an almost pristine area that is world heritage listed for its uniqueness".*
- *"The beautiful wetlands which exist beyond this proposed development will surely be put under pressure as more rubbish will accumulate and eventually find its way into the "green" areas, destroying the habitat of the natural fauna and flora unique to the area".*
- *"Increased people means more domestic animals – again more pressure put on these natural areas".*
- *The development is close to the Warriewood wetlands and I feel that it could impact on this area which could lead to an environmental disaster".*
- *"There is no assessment of the impact of human presence on the biology of the Wetlands".*
- *Our conclusion is that bringing 600 dwellings 20 metres far from the Wetlands will obviously have a negative impact on its biology (despite the buffer zones).*
- *Flora and Fauna will be in direct competition with the high anthropic activity, and there will be a significant biological modification of the surroundings".*

**Response:**

The Statement of Commitments has been updated in **Section 4** of this report to include detailed environmental management measures to mitigate impacts on the adjoining and nearby areas of retained native vegetation, Fern Creek the Warriewood Wetlands.

The development exists upstream of the Warriewood Wetlands. As part of the proposal the 25 metres Core Riparian Zone (CRZ) and 10 metre vegetation buffer for the wetlands has been identified.

A Vegetation Management Plan (VMP) has been produced for the proposed development area by Total Earth Care. The VMP identifies the removal of exotic species of vegetation and replaced with native vegetation within the CRZ and vegetation buffer.

The Stormwater and Environmental Management report at **Appendix F** prepared by Brown Consulting outlines the proposed water quality treatment strategies that are to be incorporated into the development including bio-retention basins, gross pollutant traps, as well as rainwater re-use from the roofs of buildings by utilising rainwater tanks to minimum runoff to Fern Creek and the Warriewood Wetlands.

Calculations of the areas of EECs that are proposed to be removed, retained and rehabilitated are included in the revised Flora and Fauna Assessment Report.

The Preferred Project proposes an increase in areas of retained and rehabilitate EECs from the exhibited Environmental Assessment scheme and will reduce the impacts on the endangered ecological community that would have previously occurred. By avoiding impacts to the larger area of retained EEC, the potential fragmentation and isolation of the Warriewood Wetlands with possible habitat in the adjacent Sydney Water site will be reduced.

A further detailed assessment of the impact of the proposal on the natural environment is provided in the revised Flora and Fauna Assessment report by Total Earth Care at **Appendix J**. Also included

### Insufficient development contributions

- *“The fact that Meriton’s first request is to decrease this contribution from \$70,000 to \$20,000 is unacceptable, and is of a great concern to us”.*
- *“The request that S.94 Contribution of \$70,000 per dwelling, claimed as too high and stifling residential development, be reduced to \$20,000 is not in the public interest”.*
- *“I do not see why a developer should be allowed to avoid fees that were agreed between Pittwater Council and the State Government for the Warriewood Valley and that other developers have paid. Since Pittwater Council has a policy of not subsidising the Warriewood Valley from rates paid by ratepayers from other parts of Pittwater, it is vital that Valley developers continue to contribute at the previously agreed rate to the local infrastructure that is funded from these levies”.*
- *“I understand that Pittwater Council is not going to be awarded the full \$62,000 per dwelling that it currently requires to provide all the services for the residents of this area. Who will provide for the shortfall? Our Council provides roads, street lighting, playground equipment and many other facilities and these have to be paid for”.*

### Response:

Pittwater Council’s current S.94 plan for Warriewood Valley does not make provision for apartment development. If Pittwater Council’s S.94 plan (\$67,334.29 per dwelling) was applied to the Preferred Concept Plan for 559 apartments it would yield a total S.94 charge of approximately \$37.6 million, which after subtracting the \$3.6 million in fixed costs would still yield \$34.04 million in variable costs, or some \$27,697 per head (being \$34.04m/1229 people).

This is inconsistent with other Sydney Metropolitan Council’s (for example in the City of Sydney and former South Sydney areas, and also in Ku-ring-gai LGA, S.94 contributions are around \$20,000 per dwelling or less) and less than other areas in Pittwater.

On 4 June 2010, The Minister for Planning revised the approach for setting local development contributions. This included:

- a \$20,000 per residential lot or dwelling limit on local development contributions; and

- allowing councils to apply for special rate variations for legitimate council costs arising from development.

The Minister's direction under Section 94E of the EP&A Act 1979 applies to monetary contributions required by conditions of development consent imposed by councils under section 94 of the EP&A Act.

The Direction provides that a council must not impose a condition requiring a development contribution under section 94 of the EP&A Act that requires the payment of a monetary contribution of more than \$20,000 for each residential dwelling.

It is requested that the Department of Planning impose a Section 94 Development Contribution of \$20,000 per dwelling in accordance with the Minister for Planning's Section 94E Direction of 4 June 2010.

This contribution rate will equate to a total contribution of \$11,180,000.

### **Potential to set precedent**

- *"The buildings are of an unprecedented scale in the area which will set a precedent for further building in this scale".*
- *"If this development is allowed to go ahead, what is to stop other developers wanting the same?"*
- *"Approval of such a development would set an undesirable precedent for similar development in the area".*

### **Response:**

Each site has the capacity for development based on unique environmental constraints and opportunities. These environmental characteristics determine the ability of land to accommodate development. Also relevant is the capacity of local infrastructure such as roads, schools, pedestrian and cycling facilities, recreational facilities and other urban services and utilities.

These matters have been addressed elsewhere in this report.

It is understood that the Department of Planning are reviewing the Warriewood Valley Planning Framework and are considering the capacity of the area to accommodate additional dwellings. Each precinct within the Warriewood Valley should be planned having regard to the precinct-specific opportunities and constraints.

### **Insufficient open space**

- *"Not enough open space".*
- *"There is not enough open space in the development to benefit everyone".*
- *"The Government has already acknowledged that children obesity is a major problem, yet this proposal restricts the amount of open space in which children can play".*

### **Response:**

The design of the proposed central park between Buildings D/E and F/G has been amended to create more usable active open space. The park will contain a generous picnic shelter containing BBQ's seating and tables

as well as a large grassed viewing mound suitable for passive uses and relaxation. Included in the central park in Stage 1 is an enlarged area of lawn of 900m<sup>2</sup> for children to actively play, kick a ball or run around.

An area outside the main entry to the pool centre has been designed with play equipment for children's active play. This space is to be fenced for child safety.

An active exercise area has been included in the Stage 2 area of the site, which is centrally located in the pocket park.

The subject site is an important open space link along the Fern Creek and Warriewood Wetlands Corridor. The combined cycleway and pedestrian pathway contributes to the activate recreation facilities available in Warriewood Valley and links to larger sporting facilities and parklands.

The deletion of the private road between Buildings A/B/C and D/E has created more area of common landscaped open space in the Stage 1 Preferred Project.

Development contributions are to be paid by the Proponent, associated with this development in accordance with the *Environmental Planning and Assessment Act 1979*, which can contribute to the upgrading of existing parklands or the purchase of additional land for open space purposes.

#### Site subject to flooding

- *"Despite drainage and other civil works that may be carried out, the area is low lying and subject to flooding and excess storm water at times of peak rain and storm was posing an environmental risk".*

#### Response:

The existing flood hazard was considered in the preparation of a Stormwater and Environmental Management report prepared by Brown Consulting. Refer to **Appendix F**.

In summary, the existing flood hazard was determined using the product of the flood velocity and depth. Results of modelling for the 100 year Average Recurrence Interval (ARI) event indicated a significant area with a high hazard within Fern Creek and low hazard across the flood plain. Modelling results indicated that the majority of the site would classify as high hazard for the Probable Maximum Flood (PMF) storm event, which is mostly due to the high flood depths associated with the PMF.

An earthworks strategy is proposed to fill land within the flood plan to a minimum level above the existing flood levels. It is also proposed to excavate non-filled areas within the flood plan to compensate for filled areas to provide the balance of flood plain storage. The positive effect of this strategy is that flood storage is moved from areas high in the flood plan to a lower level in the floodplain. This will provide greater flood storage for more frequent floods (say up to the 10 year ARI) than currently exists, and potentially reduces flood levels for those flood events.

The proposed bulk earthworks strategy and typical cross sections are shown in Appendix A of the Stormwater and Environmental Management report at **Appendix F** of this Preferred Project Report. The flood management strategy will ensure that peak flows are maintained at a rate not exceeding that of existing conditions.

#### **Lack of education facilities in the area**

- *“The project will not assist the children in the area and will bring way too many people into Warriewood? Will there be more funding for the local schools to reflect this massive project?”*

#### **Response:**

The NSW Department of Education & Training made a submission on the exhibited Environmental Assessment, which stated that:

*“On the basis that the forecast dwelling yield of 600 dwellings, the Department of Education and Training estimates that there could be 42 primary aged children and 36 secondary aged persons from the proposed development.*

*This number of children can be accommodated in the existing local primary school at Narrabeen North Public School and at Narrabeen Sports High School. These sites share the same site being close to the Boondah Road development”.*

Having regard to this advice, it is considered there is adequate education facilities available for the projected increase in school aged children residing in the proposed development. The Department of Education and Training can be consulted.

#### **Visual impact**

- *“I feel that the overall scale of the proposed development will severely impact on the visual amenity of the area”*
- *“The size of the overall development is way too large for this area”.*
- *“As a resident who overlooks the valley, the proposal of a 3-5 storey building is too high. This is out of character with the area, and blights the view of well established homes in my street”.*

#### **Response:**

Issues of building height and compatibility with the local context have been addressed elsewhere in this report.

#### **Noise impacts due to increased density**

- *“The proposal will increase noise levels given the increased housing density and the location is within a valley that resonates sound”.*

#### **Response:**

Acoustic privacy considerations are addressed in the Pittwater DCP 21 for residential flat buildings up to 3 storeys in height. It is noted that these controls do not apply to the Warriewood Valley Urban Release Area.

Specifically, the DCP contains the following development Outcomes and Controls:

#### **“Outcomes**

- *Noise is substantially contained within each dwelling and noise from any communal or recreation areas are limited.*
- *Noise is not to be offensive as defined by the Protection of the Environment Operations Act 1997, including noise from plant, equipment and communal or recreation areas.*



**Controls**

- *Noise-sensitive rooms, such as bedrooms, should be located away from noise sources, including main roads, parking areas, living areas and recreation areas and the like.*
- *Walls and/or ceilings of attached dwellings shall have a noise transmission rating in accordance with Part F(5) of the Building Code of Australia. (Walls and ceilings of attached dwellings must also comply with the fire rating provisions of the Building Code of Australia).*
- *Noise generating plants including pool/spa motors, air conditioning units and the like shall not produce noise levels that exceed 5dBA above the background noise when measured from the nearest property boundary.*
- *Developments must comply in all respects with the Protection of the Environment Operations Act, 1997, and other relevant legislation”.*

While the proposed acoustic privacy controls do not specifically relate to the Warriewood Valley, including the subject site, they have been taken into consideration in the preparation of this Preferred Concept Plan and Stage 1 Project Application.

Building separation distances are in full compliance with the NSW Residential Flat Design Code 2002, which aim to promote high levels of residential amenity including visual and acoustic privacy. The subject site does not adjoin any main roads that may result in adverse noise impacts on development. Proposed buildings are adequately setback from Macpherson Street and Boondah Road in accordance with the Pittwater DCP 21.

Noise generating plant for pool and spa motors are proposed to be contained within the proposed swimming pool centre, and therefore noise will be contained within the building. Roof plant is proposed to be screened from public view and setback adequately from property boundaries to avoid adverse noise impacts on adjoining residential properties.

Walls and ceilings are to be constructed to be compliant with the relevant provisions of the Building Code of Australia to avoid noise transmission between adjoining units.

The majority of the site is cleared and used for residential purposes associated with agriculture. The site is not located near any noise sensitive land uses (for example railway lines, major road or schools).

**Over population/over crowding of the area**

- *“As well as overcrowding, such huge numbers of extra people will put strain on the roads”.*

**Response:**

The proposed development will in part contribute to the achievement of additional housing for Pittwater, which is required to be achieved under the Metropolitan Strategy housing target. The proposal contributes 12.2% of the total Pittwater LGA housing target of 4600 dwellings required to the year 2031. Under the North East Subregional Strategy, Pittwater LGA is required to plan for an additional 4600 dwellings to the year 2031. The provision of 559 dwellings on the site provides 12.15% of the total residential dwelling target for the Pittwater LGA. This is considered a minor proportion of the overall growth in dwellings in the overall Pittwater

LGA.

Responses to concerns with the potential impacts of the development on local infrastructure is addressed in other sub-sections of this report.

### Removal of green space

- *"I moved to the area a few years ago and did so because it was a quite, family friendly area with lots of open spaces. This development would ruin these aspects by taking away some of that green space".*
- *"Warriewood Valley is unique in that it provides only a recreational outlet for the equestrian community but I also believe it provides not only a recreational outlet for the equestrian community but I also believe it provides an outlet for the city to breathe and a safe and serene environment to enjoy nature and an escape from the hustle and bustle of Sydney. The destruction of a sheltered and tree filled area would be a tragic loss for those of us 'green' conscious people within the community".*

### Response:

Warriewood Valley has been planned for additional housing since the 1990s and the provision of open space is in accordance with these plans. The proposal is consistent with the Warriewood Landscape Master Plan in that it provides public open space along the Fern Creek Corridor, including a shared public cycleway and pedestrian pathway.

Furthermore, the proposal is consistent with the Pittwater Council consent to DA526/08 as it incorporates the same open space areas along the Fern Creek corridor and buffer to the Warriewood Wetlands.

Importantly, the Warriewood Wetlands will remain protected by rehabilitating the Fern Creek riparian corridor and providing a vegetation buffer.

Additional open space is provided for the common use of residents and their visitors, between buildings.

### Impact on access

- *"The proposal will increase the traffic intensity (and associated noise) within the Warriewood Valley area, above and beyond those levels already anticipated within the Pittwater Council Master Plan. It will be necessary to upgrade all of the secondary feeder roads to accommodate such a large influx of residents, and this will be detrimental to the current amenity of the existing residential streetscapes".*
- *"Mona Vale Road and Wakehurst Parkway, which are the main arteries out of the area, are still only single lane roads and are heavily congested during peak hours and during the summer months at the weekends. The proposed development in Boondah Road will only escalate the congestion problem as our public transport can be unreliable especially out of peak hour times".*

### Response:

The Traffic Impact Assessment by Halcrow at **Appendix I** of this report, concludes that the proposed development would not significantly increase traffic on roads within Warriewood Valley. With the already planned intersection upgrades in Warriewood Valley, the key intersections are

expected to operate at satisfactory levels of service with the additional traffic generated by the proposed development.

The Halcrow report also states that:

*“The proposed vehicular access arrangements are considered to be satisfactory, and application of the Roads Master Plan’s design for local streets is appropriate for the future road through the site”.*

### **Surrounding road subject to flooding**

- *The exit roads from the area are the Wakehurst Parkway, which floods during heavy rains and results in road closure”.*

#### **Response:**

It is noted that some of the submissions raised concern that the proposed development is located in the area affected by flooding.

The hydraulic modelling of the study area was undertaken using the SOBEK hydraulic model developed by Cardno Lawson Treloar for Pittwater Council for the Warriewood Valley flood study.

The existing flood levels on the site for the 100 year ARI 2 hour duration storm event vary from 3.40 m AHD within Fern Creek at the western site boundary to 3.11m AHD within Warriewood Wetlands.

The existing flood levels for the PMF 2 hr duration storm event the are generated by the flood level of 4.59m AHD within Warriewood Wetlands (high level). Flows overtop Macpherson Street and flow along the western site boundary to the wetlands.

The proposed filling strategy adopted as part of this application was to fill land within the floodplain to a minimum level of RL 4.32 m. To ensure no net loss of floodplain storage below the 100 year ARI flood level, it is proposed to excavate non-filled areas within the floodplain to compensate for filled areas to provide the balance of floodplain storage.

The modelled fill/cut strategy results in no net loss in existing flood storage compared with the volume of floodplain storage in the developed scenario below the 100 year ARI flood level. The positive effects of this strategy is that flood storage is moved from areas high in the floodplain to a level lower in the floodplain. This provides greater flood storage for more frequent floods (say up to the 10 year ARI) than currently exists, and potentially reduces flood levels for those flood events.

The flood planning level for the proposed development is 0.5m above the 100 year ARI flood level within Fern Creek. The flood planning level for the proposed development varies from 3.61m to 3.90m AHD. However the proposed minimum floor level has been set at 4.5m AHD, well above the flood planning level.

The modelling has shown that during the extreme events the site is predominately flood free with no dwelling subject to inundation.

While there are existing instances of flooding of Macpherson Street, the proposed development of the site will result in an improvement with flood mitigation measures proposed. A minor overland flow path is proposed to pass along the western boundary to convey flows from Macpherson Street to Fern Creek during the PMF.

The stormwater management plan for the site has been prepared in accordance with Pittwater Council's Water Management Specification. The stormwater components used in the development will meet the principle objectives being:

- Ensuring that peak flows are maintained at a rate not exceeding that of existing conditions, while maintaining a similar design storm hydrograph;
- Improving water quality of stormwater discharging from the site such that pollutant loads are no worse than that of existing conditions;
- Ensuring that the average annual flows from the site are no greater than that of existing conditions; and
- Promoting WSUD in the design.

Refer to Stormwater and Flooding Assessment undertaken by Brown Consulting at **Appendix F**.

### Impact on STP

- *"Sydney Water's Warriewood Sewerage Treatment Plan (STP) struggles to treat the current areas supply of effluent during wet weather periods. 600 more units in the area will lead to more by-pass of the treatment process into the ocean at the Warriewood ocean outfall effect the clean beaches we currently have".*
- *"Isn't the STP already sufficiently capped? So there isn't a need for additional housing to contribute to the cost of capping!"*
- *"The Warriewood Sewerage Treatment Plant was built within a buffer zone around to ensure the safety and amenity of the surrounding area. The buffer zone was created for a purpose? To development in the buffer zone will no longer provide the security for the STP and will lead to complaints on the impact of the STP on the amenity of the development. The STP can not cope with wet weather events currently with discharges at Turrimetta headland. Introducing another 1500 people to the confined area will put further strain on the capacity of the STP".*
- *"My understanding is that the Warriewood Sewerage Treatment plan discharges its waste directly into the ocean at Warriewood headland without tertiary treatment. Surely the increase by the burgeoning population growth that is already occurring in the Warriewood Valley location with strain the capacity of the plant without this new projected increase of possibly 2000+ people, which is an increase of 3% above what is currently being required to service the current increases. The resultant outflow at the headland will further provide exposure to poorly treated effluent at even greater volumes".*

### Response:

Sydney Water Corporation was been consulted during the preparation of the Environmental Assessment. Also, Sydney Water Corporation provided a submission to the Department of Planning on the exhibited Environmental Assessment.

Correspondence from Sydney Water Corporation was included in the Exhibited Environmental Assessment that states:

*"Sydney Water currently has a program to upgrade the Warriewood Sewage Treatment Plant (STP). The upgrade is to accommodate developments within Warriewood Valley and*

*Ingleside South. The upgrade is expected to be completed in 2012, and will accommodate development in line with 2007 Metropolitan Development Program (MDP) projects for 2031.*

*Sydney Water's initial assessment of the proposed development was for 150 dwellings. The additional 450 dwellings under the current proposal will be able to connect to the Sydney Water's upgrade sewage treatment plant. However development's exceeding the 2007 MDP projection may result in the next stage of the STP upgrade to occur before 2031".*

(Sydney Water Corporation, 15 February 2010).

A Developer Contribution Deed exists for the commissioning of Stage A Works for the upgrade of the Warriewood STP between Meriton Apartments Pty Ltd and Sydney Water Corporation. The letter from Sydney Water Corporation to Meriton dated 1 July 2009 and submitted with the exhibited Environmental Assessment outlines when the deed is initiated, stating that:

*"This letter comprises, in accordance with clause 4.1 of the Deed, notification by Sydney Water to Meriton of commissioning of all of the Stage A Works. The Stage A Works Contribution of \$3,000,000, relating to Section 4.1(a), (b) and (c) of the Deed, will fall due on the Development Consent Day, should Meriton proceed to receive development consent for the Meriton land (Lots 20 & 21 /DP1080979 comprising number 3,7,9 Macpherson Street and 14, 16, 18 and 18a Boondah Street Warriewood)".*

It is understood that the Minister's determination of the Concept Plan and Stage 1 Project Application will include a condition in accordance with the abovementioned Deed for the contribution for the Stage A Works to the Warriewood STP. Refer to the revised Statement of Commitments at **Section 4** of this report.

In relation to the impact of the STP on the amenity of future residents of the site, particularly from odour, the Letter from Sydney Water Corporation to Meriton dated 7 July 2009 and submitted with the exhibited Environmental Assessment states that:

*"I would confirm Sydney Water has carried out a preliminary assessment of the predicted odour impacts of the Warriewood STP. This was undertaken following the commissioning and operation of the Stage A odour works using the AUSPLUME atmospheric dispersion model. The results indicated the required odour reductions had been achieved.*

*A further detailed odour study of the Warriewood STP will be undertaken by Sydney Water in the summer of 2009/2010 to provide the final assessment of the odour impacts from the site".*

Having regard to the advice of Sydney Water Corporation the proposed use of the site for multi-unit housing, will not be adversely impacted by odour from the STP, as a result of the Stage A Works.

### **Increase in crime**

- *"Given the size and location, as a young family in the area I have real concerns for crime increase and over a few years a slum mentality with such large over populated communities".*
- *We have personally seen a large increase in juvenile crime in the area and am deeply concerned that increasing the population in the area*

*will only exacerbate the problem”.*

**Response:**

There is no evidence provided to suggest that the proposed development at the density proposed will increase crime in the local area. Indeed the inverse is more likely. More people in the local area can improve surveillance of public open spaces and streets and therefore dissuade anti-social behaviour.

The design of the Preferred Concept Plan and Stage 1 Preferred Project in terms of building layout and secure private and communal open space will provide good passive surveillance of public domain areas.

**Visual bulk**

- *“I would consider a maximum of 3 storeys would be appropriate for the subject site, and even then increased set back from Macpherson Street and Boondah Road should be provided to reduce the overall bulk”.*

**Response:**

Community concerns about the proposed height of buildings is addressed earlier in this section of the report. Taller 5 storey buildings are proposed to be set well back from Macpherson Street and Boondah Road so that the higher densities buildings are located adjacent to the open space amenities with shared cycleway and pedestrian pathway on the site and to offer views over the Warriewood Wetlands and Fern Creek corridor.

The proposal adopts the 6.5 metre building setback to Macpherson Street and Boondah Road from the Pittwater DCP 21. The building setbacks are to be well landscaped with a mix of trees, shrubs and ground covers, as well as courtyards for ground level units. Landscaping will assist in softening the perceived bulk of buildings when viewed from the public domain.

The proposed 5 storey buildings are positioned behind the proposed 3 storey buildings and setback from Macpherson Street. Given the substantial setback of the 5 storeys buildings beyond the 3 storey buildings, the taller buildings will partially screened from the public domain. It is expected that motorists driving along Macpherson Street and Boondah Road will see a 3 storey streetscape, with only glimpses of the 4 and 5 storey buildings between gaps in the 3 storey streetscape.

The reduction in the height of part of Buildings E and F from 5 storeys to 4 storeys and Buildings K and M from 5 storeys to 4 storeys, will provide a transition in scale from 3 storeys up to 5 storey buildings and will assist in reducing the overall bulk of the development when views from the public domain.

**Devaluation of existing property**

- *“A development such as this will devalue our property and spoil the serene nature of the area”.*

**Response:**

There is no evidence presented with the submissions, to assess whether the proposed development will have a negative impact on property values in the local area. It can be reasonably concluded that the proposed

development of additional community facilities including the shared cycleway and pedestrian pathway, the provision of a child care centre and environmental rehabilitation works could improve property values in the local area.

The impact of development on property values is not a planning matter to be considered in the assessment of the Preferred Concept Plan and Stage 1 Preferred Project.

#### **Lack of child care facilities in the area**

- *There are very few Child Care facilities available in our area, and significant waiting lists for those that are available”.*

#### **Response:**

The Proponent recognises that there is a lack of child care facilities in the local area. This is the reason why a new 40 place child care centre is proposed fronting Macpherson Street. It is envisaged that demand for the child care centre will come partly from future residents living on the subject site, as well as from the local area.

#### **Rainwater harvesting required**

- *“The developments must include the provision of catching and storing rain and stormwater. This water can then be used to augment water for domestic purposes for at least maintaining gardens and flushing toilets”.*
- *The size of the proposed rainwater tanks will result in most of the roofing water going to waste. There is ample room for the design of include much larger tanks, and the rainwater can be connected to all the units for bathroom and laundry use”.*

#### **Response:**

BASIX requires that the Proponent must provide adequate water efficiency to meet the mandatory target of 40% reduction in potable water when compared with a standard multi-unit residential development. The proposed development has achieved the BASIX water target of 40%.

The water usage of the development is calculated based on the number and efficiency of permanent fixtures and appliances such as:

- taps;
- showerheads and toilets;
- the dish washer;
- clothes washing machine; and
- Alternative water supply including rainwater harvesting

The size of the rainwater collection tank and number of connections has a major impact on water efficiency as does the area of gardens and lawns and whether or not low-water plant species are incorporated.

The Stage 1 Preferred Project incorporates a rainwater tank with a capacity of 70,000 Litres, amongst other water efficiency initiatives. Refer to the BASIX Certificate at **Appendix K**.

### Impact on water

- *“Other infrastructure that has obviously not been addressed is water”.*
- *“There is no attempt to address the management of water from the site given that it will detrimentally impact on our Wetlands”.*

#### **Response:**

The Stormwater Management Plans illustrate the proposed measures to treat and manage water from the proposed residential development. An assessment of stormwater quality is included in the Stormwater and Environmental Management report prepared by Brown Consulting at **Appendix F**. This Plan is prepared in accordance with both Council's requirements and the Director General's Requirements.

Water quality modelling of the proposed development has been undertaken using the Model for Urban Stormwater improvement Conceptualisation (MUSIC) software package.

The objective of the proposed stormwater quality treatment strategy is to treat stormwater to an acceptable level such that pollutant loads are no worse than existing runoff quality conditions. The water quality treatment strategies for the Stage 1 Preferred Project as well as the future Stage 2 development each consist of the following:

- Stormwater re-use of dwelling roof runoff by utilising rainwater tanks;
- Primary pollutant trap capable of removing gross pollutants, sediment and oils to pre-treat road and lot drainage, and
- A bio-retention basin which will receive flows from the pollutant traps.

The proposed bio-retention basins are to incorporate plants selected for their tolerance to period of inundation. Plantings assist to filter stormwater runoff before entering the Fern Creek and Warriewood Wetlands. Each bio-retention basin also incorporated HPDE or Bentofix liners beneath the gravel layer to ensure no infiltration into the surrounding soil occurs.

The Warriewood Valley Water Management Specification provides site storage requirements and permissible site discharge for Sector 14 including the subject site known as Buffer Area 3. The on-site detention requirements will utilise 2780m<sup>3</sup> of water storage located in the bio-filtration basin. The DRAINS modelling results indicate that the development of the Site (with On-site Detention) would not increase the peak flow compared with existing conditions.

In relation to environmental management measures, the development existing upstream of the Warriewood Wetlands. Included in the proposal is a 20 metre Core Riparian Zone (CRZ), a 10 metre vegetation buffer and a 25 metre Asset Protection Zone.

A Vegetation Management Plan has been prepared by Total Earth Care, and is included at **Appendix J**.



**Insufficient notification area**

- *Despite living 800 metres from the subject site, I did not receive an official notification letter from the Department of Planning. Given that the proposal has been declared a “Major Project” under Part 3A, a wider range of residents should have been notified, as most people that will be impacted by the proposal have only found out through the local media”.*

**Response:**

The Department of Planning determined the area where the proposed Environmental Assessment was notified.

**Pittwater LGA requires higher densities**

There was some support for higher density forms of housing in the Pittwater LGA, due to the short supply for such housing types in the area.

**Response:**

The recognition of a need for higher densities in Pittwater LGA is supported by the demographics. Over 80% of housing stock is single detached dwellings, which is amongst the highest proportion of detached dwellings of Sydney's LGAs.

The Preferred Concept Plan seeks approval for 559 dwellings in two (2) stages. A total of 56,736.6m<sup>2</sup> of GFA is proposed. The site area is 81,180m<sup>2</sup> (8.118 Ha). This equates to an FSR of 0.69:1 is proposed. This overall density for the site is considered appropriate for the site having regard to the following considerations:

- The proposed reduction from 600 dwellings to 559 dwellings was the result of amendments to the height of buildings, reconfiguration of buildings and changing the internal layout of apartments and their mix. These changes have adequately addressed the issues raised in submissions;
- The proposal will result in a residential development, providing a mix of Studio, 1, 2 and 3 bedroom units, which will contribute to housing affordability and choice within Pittwater LGA. The proposal will increase the population numbers within Warriewood Valley, thereby increasing participation in local cultural and recreational activities, which support the targets of the NSW State Plan, The Sydney Metropolitan Strategy: City of Cities and the North East Subregional Strategy;
- The majority of the existing housing stock in the North East is detached dwellings, making up 62.4 % of housing stock in the subregion, semi-detached houses, terraces and townhouses make up 16.2 %, and units and apartments make up 21.4%;
- In Pittwater, the North East Subregional Strategy indicates that 80.4% of housing stock is in the form of detached dwellings, 13.9% is medium density housing and 5.7% is apartments;
- It is noted in the subregional strategy that the low density character and high quality housing stock within many areas of the subregion is highly valued by residents; however, there is significant demand for a broader mix of housing types, including medium and high density housing.

- A key element of the Metropolitan Strategy is to ensure an adequate mix of housing is available. For the North East Subregion this will entail complementing the high proportion of low-density accommodation with more medium and high density housing. These types of housing will help meet centres and transport objectives. It will also meet demand from an ageing population to 'age in place' and be more affordable form of entry into the North East housing market.
- Appropriately co-locating new urban development with existing and improved transport services; and improving the efficiency of the road network.
- The North East Subregional Strategy sets a target of 17,300 new dwellings including a small amount of greenfields development and 16,000 new jobs in the subregion (which includes Pittwater, Warringah and Manly LGAs) by 2031. The Strategy aims to increase capacity and use of public transport, noting that 72 percent of all trips by residents of the subregion are made by car (as driver or passenger), and 9.5 percent of trips are made by public transport. It has one of the highest proportion of car use of any subregion in Sydney.
- Almost 80 per cent of jobs in the North East Subregion are taken by residents of the subregion, and half of all workers in the North East Subregion live and work within the subregion.
- The proposal will support the increased frequency of bus services to the locality to cater for the additional demand. Already there are three (3) bus services to the Warriewood Valley operated by Sydney Buses and numerous buses services operate through Mona Vale along Pittwater Road and Barrenjoey Road. Sydney Buses has indicated that service levels can be reviewed once the subject development has been completed, noting that the development offers the opportunity to provide a higher level of service in Warriewood.
- The North East Subregion Strategy seeks to strengthen the role of buses, encouraging use of public transport, accommodating growth and relieving road congestion. Integrated land use and transport planning are proposed to ensure that new and improved infrastructure and services lead to an increased share of peak hour journeys by public transport, which is a key State Plan Priority (S6). The Strategy identifies a number of measures to increase the capacity of the bus network in the North East, including improved physical and electronic bus priority measures, operational strategies such as increased use of articulated buses, increased frequency and off-board ticket sales.
- The proposal will not significantly increase traffic on roads within Warriewood Valley, above that which has already need planned;
- With the already planned infrastructure upgrades in Warriewood Valley, the key intersections are expected to operate at satisfactory levels of service with the additional traffic generated by the proposed development.
- The proposal responds to the density and character of surrounding development by maintaining a height limit of 3 storeys to each of the external street frontages in response to the 3 storey aged housing development to the north. Five (5) storey buildings are located to the middle and rear of the site adjacent the open space corridor. An appropriate transition in scale is provided to the two storey development to the west by the proposed single storey childcare and retail building, open space corridor along the western boundary and width of the internal road reserve.
- The proposed density expressed as a floor space ratio of 0.65:1 is

comparable with other medium density areas in Sydney, which are similarly located with bus transport access. For instance medium density areas in Sutherland LGA allow floor space ratios of up to 0.7:1.

- This report demonstrates that the site is capable of holding a higher development density than that identified by Pittwater Council. The development provides an environmentally sustainable residential development having regard to site constraints and which will provide a high level of residential amenity to future occupants of the development having regard to design quality principles and guidelines of SEPP 65 and the NSW Residential Flat Design Code 2002 for residential flat development.

For the reasons outlined above the proposed density is considered appropriate, having regard to strategic and site-specific considerations.

### **Lack of seniors housing for future**

- *“There is not enough fore thought for seniors future housing”*

#### **Response:**

Seniors living housing is being developed in the Warriewood Valley. The Anglican Retirement Village Seniors Living Development known as Warriewood Brook is located immediately to the north of the subject site. Stage 1 of the development is complete and comprises a total of 119 low care nursing home, respite care, and secure dementia care units. The total development will comprise 260 independent living unit as well as the 119-bed nursing home.

It is considered there is a shortage of housing for younger people, as well as older persons in Pittwater. The North East Subregional Strategy, prepared by the Department of Planning describes the existing housing stock within the subregion including Pittwater LGA which make up 80% of the dwellings in Pittwater, which are priced out of reach of younger people wanting to remain living on the northern beaches.

Larger detached dwellings on large blocks can also be unmanageable for older persons. Smaller attached dwellings, medium density and higher density housing can be more suitable for older persons, looking to down size but remain living in the Local Pittwater area. Development such as this development can be suitable for older persons, who wish to living independently in smaller dwellings.

### **Concern over tenants in retail**

#### **Response:**

Concern is raised with the selection of future retail tenancies and their impacts on the amenity of surrounding residents.

The two (2) retail tenancies that were co-located with the child care centre in the exhibited Environmental Assessment Scheme have been deleted from the Preferred Project.

### **Should provide low cost housing**

*“(The Proposal) does not contribute to the housing mix nor housing affordability across Pittwater”.*

**Response:**

The proposal does contribute towards housing affordability and provides an appropriate mix of dwelling types to achieve this goal by increasing the provision of smaller dwellings. It is considered that the development will provide affordable alternatives to large 3-4 bedroom detached dwellings, the highest proportion of dwelling types in the Pittwater LGA.

The NSW RFDC 2002, provides a guide for affordable housing, that are provided from the Affordable Housing Service minimum unit sizes that can contribute to housing affordability, as follows:

- 1 bedroom apartment – 50m<sup>2</sup>
- 2 bedroom apartment - 70m<sup>2</sup>
- 3 bedroom apartment - 95m<sup>2</sup>

The proposed units are generally consistent with the minimum sizes with some larger 2 and 3 bedroom units. Proposed units, generally have the following sizes:

- Studio – 45m<sup>2</sup>
- 1 bed – 55m<sup>2</sup>
- 2 bed (large) – 85m<sup>2</sup>
- 2 bed (small) – 78m<sup>2</sup>
- 3 bed - 105m<sup>2</sup>

**Solar energy should be required**

- *“It must also include the installation of solar collectors for electricity generation either for direct use with the development or on-selling to the grid”.*
- *Meriton seem to be offering only 38kW of solar PV generation from the whole complex. Yet would cost very little more to design the roofing so that the whole area could be used for solar PV generation. The current subsidies and incentives from the Federal Government can be used by the developer to provide a PV system for many of the unit holders, this reducing the energy needs of the development. Meriton have not grasped the full potential of this opportunity”.*

**Response:**

BASIX certificates for the Stage 1 Preferred Project are included at **Appendix K**.

The proposed development has achieved the energy target of 30-35% to pass the mandatory BASIX target for energy efficiency.

The energy usage of the development is calculated based on the efficiency of fixed appliances that will be used. This includes the air conditioning system, hot water system, lighting, exhaust fans and the cook top, oven, and clothes drying facilities.

To achieve the minimum 30-35% Energy Efficiency target, photovoltaic systems are required to generate energy in the Stage 1 Preferred Project. A total of 31.5 peak kW will be spread between all buildings.

## 4 Revised Statement of Commitments

The Draft Statement of Commitments provided in the Environmental Assessment has been revised to respond to the issues raised during the exhibition period. Revisions to the Statement of Commitments have been made to introduce additional environmental management and mitigation measures in response to key issues raised in submissions.

This statement of commitments related to the following matters:

- Environmental Management Measures
- Future application
- Construction
- Construction Vehicle Management Plan
- Ecologically Sustainable Development
- Waste Management
- Flora and Fauna
- Arboricultural Assessment/Vegetation Management Report
- Aboriginal Archaeological and Cultural Heritage
- Geotechnical
- Infrastructure Provision
- Bushfire Protection Measures
- Ecological restoration works

### 4.1 Environmental Management Measures

#### **Prior to Construction commencing**

- Inspection (by a qualified biologist) of hollow-bearing trees and dense shrub thickets for fauna habitation, prior to their felling and removal. Where animals are located, they would be carefully released at the time, or captured for later release. Captured animals would generally be released into the edges of the Warriewood Wetlands at dusk, and injured fauna would be transferred to the care of WIRES.
- The retention of hollow-bearing trees and all native trees within the Core Riparian Zone is required.
- Installation of nest boxes for hollow dependent species such as birds and microbats prior to tree removals within retained vegetation in close proximity to previous Poplar plantations. A Nest Box Plan should be prepared and approved prior to construction that sets out the numbers of nest boxes required, target species, nest box designs, installation and monitoring requirements.
- Installation of temporary exclusion fencing along the outer boundaries of the buffer zones, including the 10m Buffer Strip, Public Riparian Zone and remnant native vegetation areas, prior to construction. Appendix 4 of P21 DCP addresses the protection of existing vegetation, and states that “The existing vegetation, to be retained, should be protected from root compaction, root, trunk and limb damage, soil contamination and changes in surface level that may affect the health of each specimen. Protection measures are to be installed prior to the commencement of any earthworks. It is

suggested that a chain wire fence be erected 1 metre beyond the dripline of each specimen for the full circumference of all vegetation to be protected.

- All stands of Swamp Sclerophyll Forest adjacent to the development footprint that will be retained will be protected by erecting temporary exclusion fencing during construction in accordance with the Arborists recommendations.

#### **During construction**

- Monitoring of retained stands of Swamp Sclerophyll Forest and the riparian zones for the presence of threatened birds species during their breeding season that may nest within this type of habitat. This would include Ixobrychus flavicollis Black Bittern.
- Revegetation within the 25 metre Asset Protection Zone must be designed so that the function of the APZ is not compromised by the landscaping works. This will require careful selection of species, creation of gaps in the canopy and separation of the ground and canopy fuel layers.
- The on-going management of this zone will be required;
- Landscaping around the entrance way at Boondah Road, and in the other areas of the development that required removal of Swamp Sclerophyll Forest, (the south eastern section of the site) should consist of species characteristic of this community;
- The location of material stockpiles and vehicle parking areas must be on already cleared and disturbed land, well away from vegetation to be retained on the site and the boundary close to the wetlands.
- Chipping of felled trees and other vegetation (excluding noxious or invasive weeds) from the site for use as mulch in rehabilitation works is recommended;
- Install appropriate erosion control measures during the construction phase of the development (e.g. silt fences, sediment ponds etc), to protect terrestrial habitats on-site and wetland habitats downslope of the site. These will conform to Managing Urban Stormwater - Soils and Construction (NSW Department of Housing 1998), and will be maintained throughout the construction period.
- Manage stormwater, wastewater and runoff as per the P21 DCP and design plans in relation to the sites proximity to a significant wetland.
- Manage construction materials, fuels and wastes should be controlled to minimise the potential for any discharge of chemicals or contaminants (such as concrete or other building materials) impacting upon adjacent areas of native vegetation or waterways.

#### **Post-construction**

- The program of weed control and bush regeneration in all conservation areas retained on-site is to continue, with preference to areas of Swamp Sclerophyll Forest and the riparian zones, in

accordance with the approved management plan to enhance the quality of the remaining vegetation. Conduct monitoring in accordance with the approved VMP.

- Material stockpiles and vehicle parking areas that have been created on site are to be removed and made good upon completion of the construction works.
- Non-permanent erosion control measures (e.g. silt fencing, sediment ponds) implemented during the construction phase of the development are to be carefully removed following completion and stabilisation of the works.
- Management of stormwater, wastewater and runoff will continue as per the project design and P21 DCP in relation to the sites proximity to a significant wetland.

#### 4.2 Vegetation management measures

Implement the recommendations of the Vegetation Management Plan prepared by Total Earth Care submitted with the Environmental Assessment.

#### 4.3 Future applications

The Proponent commits to preparing a separate Project Application for the Stage 2 area as detailed in the Concept Plan.

Strata and stratum subdivision including all necessary easements to facilitate public access arrangements and dedication of the proposed local streets and land to Pittwater Council that have been agreed to by the consent authority in the determination of this Major Project Application MP 09\_0162.

The final subdivision plans are to be registered with the Lands Titles Office prior to the occupation of the site.

#### 4.4 Construction management measures

A detailed Demolition and Construction Environmental Management, will be prepared by the Proponent for approval prior to the commencement of any demolition or construction works on site.

#### 4.5 Ecologically Sustainable Development

The Proponent commits to the building sustainability initiatives as detailed in the schedule contained in the BASIX certificate submitted with the Preferred Project Report.

#### 4.6 Waste management measures

The recommendations as detailed in the Waste Management Plan, prepared by Wastech engineering submitted with the Environmental Assessment will be incorporated into the proposed residential development.

#### 4.7 Arboricultural measures

The recommendations made in relation to tree removal and tree protection zones will be adopted by the proposed development in accordance with the Tree and Landscape Consultants submitted with the Environmental Assessment.

#### 4.8 Geotechnical measures

The recommendations of the Geotechnical Assessment prepared by Jeffery Katauskas Pty Ltd provided with the Environmental Assessment will be incorporated into the proposed development.

#### 4.9 Bushfire Protection Measures

The bushfire protection measures as detailed in Flamezone Pty Ltd report submitted with the Environmental Assessment, the Planning for Bushfire Protection Pty Ltd report with the Preferred Project Report and the recommendations of the NSW Rural Fire Service will be adopted in the proposed development.



## 5 Conclusion

The proposed development at 14-18 Boondah Road, Warriewood seeks consent for:

**Preferred Concept Plan** comprising:

- a total of 16 residential apartment buildings of 3, 4, Part 4/Part 5 and 5 storeys in height,
- a total of 559 dwelling units,
- a gymnasium and swimming pools,
- a childcare centre; and
- an internal network of public and private roads;
- a combined cycleway and pedestrian pathway; and
- landscaping of private, communal and public open space and ecological rehabilitation works.

**Stage 1 Preferred Project** comprising:

- demolition of existing dwellings and structures and removal of vegetation on the subject site;
- excavation, earthworks and flood mitigation works;
- construction of 7 residential apartment buildings ranging in height from 3 to 5 storeys providing 295 dwelling units;
- basement parking for 471 cars comprising 429 resident car spaces and 42 visitor spaces;
- a gymnasium and swimming pools;
- construction of an internal access road and connection with Macpherson Street and Boondah Road including utilities and services infrastructure within the road reserves for electricity, potable water, gas and telecommunications;
- landscape works to public, communal and private open space areas associated with the Stage 1 development and ecological rehabilitation works to Fern Creek corridor and the vegetated buffer to the Warriewood Wetlands;
- bushfire management works including vegetation removal associated with the proposed Asset Protection Zone;
- a public pedestrian cycle way through the site; and
- flood mitigation works including bulk earthworks to establish flood storage areas and bio-retention basins.

The key principles that have drive the proposed design are to provide high quality residential amenity, provide contemporary urban design of streets, open spaces and built form that responds to the local context and to effectively manage and mitigate impacts during demolition and bulk earthworks, construction and the on-going operation of the site on the surrounding area, including the significant Warriewood Wetlands and Fern Creek corridor.

The following is an overview of the key changes made to the Concept Plan and Stage 1 Project Application, in response to the submission received during the exhibition of the Environmental Assessment:

- reduction in the height of part of Building E and Building F and all of Building K from 5 storeys to 4 storeys in response to concerns about the building separation distances;
- reduction in the total number of dwellings from 600 to 559 including a reduction in the Stage 1 Project Application from 313 to 295 dwellings, in response to concerns about density, separation distances and solar access;
- amendments to the footprints of Buildings O and P to accommodate the relocated bio-retention basin B and in response to concerns about infrastructure works within the vegetation buffer;
- the deletion of the two shops and the retention of the child care centre at the corner of the new local road and Macpherson Street in response to concerns about permissibility and requirements for adequate setbacks to the western boundary, stormwater overland flow and the spatial requirements for the new local road;
- an increase in the number of basement parking spaces in the Stage 1 Project Application from 352 car spaces to 471 cars comprising 429 resident car spaces and 42 visitor spaces in response to concerns about providing sufficient car parking spaces;
- deletion of the following internal private roads:
  - between Buildings A/B/C and Buildings D/E in response to concerns about the adequacy of common open space and setbacks of buildings D/E from the private road and the amenity of ground level units in those buildings;
  - private road access to Building O in response to concerns about impacts on the Endangered Ecological Community fronting Boondah Road, vehicle access will remain at the south eastern side of Building P;
- Relocation and enlargement of bio-retention basin B from adjoining the new local road to adjoining Buildings O and P and amendments to the flood storage areas to account for additional flood storage requirements.
- Amendments to the design of communal open space between Buildings D/E and F/G in response to concerns about the utility of the space for active recreation and sunlight access.

The Project Application is consistent with the Part 3A of the Environmental Planning and Assessment Act 1979, the Director General's Environmental Assessment Requirements. This report has addressed all of the Government and public submissions received, and has addressed concerns raised through the above changes to the design. Accordingly, it is recommended that the Minister for Planning approve the subject Concept Plan and Stage 1 Project Application subject to the revised Statement of Commitments.