STATEMENT OF ENVIRONMENTAL EFFECTS

Modification of Land and Environment Court Issued Consent

Proceedings No. 10083 of 2016

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Statement of Environmental Effects

S96AA Modification of Land and Environment Court Issued Consent

Proceedings No. 10083 of 2016

Lot 1, DP 5055

No. 8 Forest Road, Warriewood

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1 INTRODUCTION

On 3rd May 2017, the Land and Environment Court of NSW (the Court) upheld an appeal and granted deferred commencement consent to the above development involving the construction of a residential development incorporating 81 dwellings and associated civil works and landscaping. This consent has subsequently become operative with initial preparatory works commencing on site.

Council is currently considering 2 x applications made pursuant to section 96(AA) of the Environmental Planning and Assessment Act 1979 ("the Act") proposing the modification of the approved titling arrangement and the introduction of a staging plan to enable the staging of the approved development works.

We have again been engaged to prepare an application pursuant to Section 96(AA) of the Act seeking the modification of the consent involving the reconfiguration of 6 x approved 2 and 3 bedroom apartments to create 12 x 2 bedroom apartments. This will change the dwelling mix and increase the total dwelling yield across the development site from 81 to 87. This has also necessitated a change in the location and number of accessible apartments with the additional basement vehicular circulation and bulk storage areas proposed as part of the earlier S96AA application utilised to meet the additional demand for car parking and storage now sought.

This submission is to be read in conjunction with the following modified documentation:

- Architectural plans A-000(3), A-001(04), A-099.1(04), A-099.2(04), A-100.1(02), A-100.2(02), A-101.1(02), A-101.2(02), A-102.1(02), A-102.2(02), A-199.1(02), A-199.2(02), A-200(02), A-202(01), A-300(02), A-500(02), A510(02), A-520(02), A-540(02), A-600(02), A-601(02), A-602(02), A-603(01) prepared by Drew Dickson Architects;
- Addendum Preliminary Contamination and Geotechnical Assessment letter prepared by Cardno;
- Addendum Bushfire Assessment letter prepared by ABPP;
- Addendum Accessibility letter prepared by MGAC;
- Addendum Traffic and Parking Assessment prepared by John Coady; and
- Design Verification Statement prepared by Drew Dickson Architects.

All proposed works are located within the previously approved building footprint and envelope with the previously approved landscape and drainage regimes unaltered as a consequence of the modifications sought.

The proposed dwelling yield remains within the permissible range prescribed by clause 6.1(3) Pittwater LEP 2014 (PLEP). The proposed increase in dwelling yield does not prevent the orderly and economic use and development of No. 4 Forest Road noting Council's position during the recent Court proceedings that clause 6.1(3) is erroneous in that the maximum dwelling yield should be 99 dwellings for Sector 5 representing the adopted yield of 32 dwellings per hectare pursuant to the Warriewood Valley Strategic Review Report (WVSRR). This error can be corrected at any time by Council or a third party by way of a planning proposal.

Council can be satisfied that the modifications involve minimal environmental impact and the development as modified represents substantially the same development as originally approved. Accordingly, the application is appropriately dealt with by way of Section 96(AA) of the Environmental Planning and Assessment Act 1979 which enables Council as the consent authority to modify a Court issued consent.

The proposed modifications succeed when assessed against the Heads of Consideration pursuant to section 79C of the Environmental Planning and Assessment Act, 1979 as amended. It is considered that the modifications, the subject of this document, is appropriate on merit and is worthy of the granting of development consent.

2 DESCRIPTION OF PROPOSED MODIFICATIONS

2.1 Proposed physical works

The application proposes the reconfiguration of 6 x approved 2 and 3 bedroom apartments to create 12 x 2 bedroom apartments. This will change the dwelling mix and increase the total dwelling yield across the development site from 81 to 87. This has also necessitated a change in the location and number of accessible apartments with the additional basement vehicular circulation and bulk storage areas proposed as part of the earlier S96AA application utilised to meet the additional demand for car parking and storage now sought.

This submission is to be read in conjunction with the following modified plans:

- Architectural plans A-000(3), A-001(04), A-099.1(04), A-099.2(04), A-100.1(02), A-100.2(02), A-101.1(02), A-101.2(02), A-102.1(02), A-102.2(02), A-199.1(02), A-199.2(02), A-200(02), A-202(01), A-300(02), A-500(02), A510(02), A-520(02), A-540(02), A-600(02), A-601(02), A-602(02), A-603(01) prepared by Drew Dickson Architects;

The resultant residential apartment mix is as follows:

- 8 x 1 bedroom units;
- 16 x 2 bedroom units;
- 47 x 3 bedroom units; and
- 1 x 4 bedroom unit.

The total number of accessible apartments has been increased from 16 to 18 as detailed on the accompanying plan.

The application proposes a minor increase in floor space where rooms have been extended in part onto approved balcony areas. All proposed works are located within the previously approved building footprint and envelope with the previously approved landscape and drainage regimes unaltered as a consequence of the modifications sought.

2.2 Conditions

The modifications necessitate the modification of the following conditions of consent:

Condition A1(a) - This condition is to be modified to reflect the modified plans as outlined above.

Condition B19 - This condition is to be modified to reflect 18 adaptable units.

Condition B67 - This condition is to be modified to reflect the modified apartment mix namely:

a. 8 x 1 bedroom units;

b. 16 x 2 bedroom units;

c. 47 x 3 bedroom units; and

d. 1 x 4 bedroom unit.

3 STATUTORY PLANNING FRAMEWORK

The following section of the report will assess the proposed development having regard to the statutory planning framework and matters for consideration pursuant to Section 79C of the Environmental Planning & Assessment Act, 1979 as amended. Those matters which are required to be addressed are outlined, and any steps to mitigate against any potential adverse environmental impacts are discussed below.

3.1 Environmental Planning and Assessment Act 1979

Section 96(AA) of the Act provides that:

(1) A consent authority may, on application being made by the applicant or any other person entitled to act on a consent granted by the Court and subject to and in accordance with the regulations, modify the development consent if:

(a) it is satisfied that the development to which the consent as modified relates is substantially the same development as the development for which the consent was originally granted and before that consent as originally granted was modified (if at all), and

(b) it has notified the application in accordance with:

(i) the regulations, if the regulations so require, and

(ii) a development control plan, if the consent authority is a council that has made a development control plan that requires the notification or advertising of applications for modification of a development consent, and

(c) it has notified, or made reasonable attempts to notify, each person who made a submission in respect of the relevant development application of the proposed modification by sending written notice to the last address known to the consent authority of the objector or other person, and

(d) it has considered any submissions made concerning the proposed modification within any period prescribed by the regulations or provided by the development control plan, as the case may be.

(1A) In determining an application for modification of a consent under this section, the consent authority must take into consideration such of the matters referred to in section 79C (1) as are of relevance to the development the subject of the application."

In answering the above threshold question as to whether the proposal represents "substantially the same" development the proposal must be compared to the development for which consent was originally granted, and the applicable planning controls.

In order for Council to be satisfied that the proposal is "substantially the same" there must be a finding that the modified development is "essentially" or "materially" the same as the (currently) approved development - Moto Projects (no. 2) Pty Ltd v North Sydney Council [1999] 106 LGERA 298 per Bignold J.

The above reference by Bignold J to "essentially" and "materially" the same is taken from Stein J in Vacik Pty Ltd v Penrith City Council (unreported), Land and Environment Court NSW, 24 February 1992, where his honour said in reference to Section 102 of the Environmental Planning and Assessment Act (the predecessor to Section 96):

> *"Substantially when used in the Section means essentially or materially or having the same essence."*

What the abovementioned authorities confirms is that in undertaking the comparative analysis the enquiry must focus on qualitative elements (numerical aspects such as heights, setbacks etc) and the general context in which the development was approved (including relationships to neighbouring properties and aspects of development that were of importance to the consent authority when granting the original approval).

When one undertakes the above analysis in respect of the subject application it is clear that the previously approved above ground built form, landscape and drainage regimes are not in any readily discernible manner altered as a consequence of the modifications sought. All proposed works are located within the previously approved building footprint and envelope with the previously approved landscape and drainage regimes unaltered as a consequence of the modifications sought.

The proposed dwelling yield remains within the permissible range prescribed by clause 6.1(3) Pittwater LEP 2014 (PLEP). The proposed increase in dwelling yield does not prevent the orderly and economic use and development of No. 4 Forest Road noting Council's position during the recent Court proceedings that clause 6.1(3) is erroneous in that the maximum dwelling yield should be 99 dwellings for Sector 5 representing the adopted yield of 32 dwellings per hectare pursuant to the Warriewood Valley Strategic Review Report (WVSRR). This error can be corrected at any time by Council or a third party by way of a planning proposal.

In this regard, the approved development remains, in its modified state, a development which will continue to relate to its surrounds and adjoining development in an identical fashion to that originally approved in terms of building form/ urban design, spatial relationship, landscaping and drainage.

The Court in the authority of Stavrides v Canada Bay City Council [2007] NSWLEC 248 established general principles which should be considered in determining whether a modified proposal was "substantially the same" as that originally. A number of those general principles are relevant to the subject application, namely:

- The proposed use does not change;
- The previously approved landscape and drainage regimes are unaltered as a consequence of the modifications sought;
- The modifications maintain the previously approved residential amenity and environmental outcomes; and
- The development continues to provide appropriately for off-street parking.

On the basis of the above analysis we regard the proposed application as being "essentially or materially" the same as the approved development such that the application is appropriately categorised as being "substantially the same" and is appropriately dealt with by way of Section 96(AA) of the Act.

3.2 Pittwater Local Environmental Plan 2014

The Pittwater Local Environmental Plan 2014 is the principal local environmental planning instrument applicable to the land. The relevant provisions of PLEP 2014 and the manner in which they relate to the site and the proposed development are assessed below.

3.2.1 Zoning and permissibility

The developments permissibility when assessed against the provisions of PLEP 2014 are not compromised as a consequence of the modifications sought. The development will continue to be consistent with the objectives of the zone and to that extent there is no statutory impediment to the granting of the modifications sought.

3.2.2 Height of buildings – Exceptions to Development Standards

Pursuant to clause 4.3 of PLEP 2014 the maximum building height for development on the land is 10.5 metres. We confirm that the previously approved building heights are not altered with all modified work sitting comfortably below the 10.5 metre height standard.

3.2.3 Warriewood valley Release Area

Pursuant to clause 6.1 of PLEP 2014 development consent must not be granted for development on land in sector 5 unless the consent authority is satisfied that not more than 94 or less than 75 dwellings will be erected on the land. The stated objectives of the clause are as follows:

a) to permit development in the Warriewood Valley Release Area in accordance with the Warriewood Valley Strategic Review Report and the Warriewood Valley Strategic Review Addendum Report,

b) to ensure that development in that area does not adversely impact on waterways and creek line corridors, protects existing native riparian vegetation and rehabilitates the creek line corridors,

c) to facilitate the mitigation of odours from the Warriewood Sewage Treatment Plant on the users and occupiers of residential development in a buffer area

The application proposes the reconfiguration of 6 x approved 2 and 3 bedroom apartments to create 12 x 2 bedroom apartments. This will change the dwelling mix and increase the total dwelling yield across the development site from 81 to 87.

The proposed dwelling yield remains within the permissible range prescribed by clause 6.1(3) Pittwater LEP 2014 (PLEP). The proposed increase in dwelling yield does not prevent the orderly and economic use and development of No. 4 Forest Road noting Council's position during the recent Court proceedings that clause 6.1(3) is erroneous in that the maximum dwelling yield should be 99 dwellings for Sector 5 representing the adopted yield of 32 dwellings per hectare pursuant to the Warriewood Valley Strategic Review Report (WVSRR). This error can be corrected at any time by Council or a third party by way of a planning proposal.

Further, clause 6.1(4) states Development consent must not be granted for development on land to which this clause applies unless the consent authority is satisfied that the proposed development will not have any significant adverse impact on any of the following:

(a) opportunities for rehabilitation of aquatic and riparian vegetation, habitats and ecosystems within creek line corridors,

(b) the water quality and flows within creek line corridors,

(c) the stability of the bed, shore, and banks of any watercourse within creek line corridors

In this regard, the modifications sought do not alter the previously approved outcomes as they relate to the clause 6.1(4) considerations with all works, as modified, generally contained within the previously approved building footprint and envelope.

In relation to the acceptability of the density proposed having regard to the reasonable future development potential of No. 4 Forest Road we refer to the judgement in the previous land and Environment Court Proceedings (Warriewood vale Pty Limited v Northern Beaches Council and Anor (No.2) [2017] NSWLEC 1220) by the Court preferred the evidence provided by the applicant town planning and urban design experts in the proceedings in which a maximum dwelling density of between 10 and 13 dwellings could potentially be accommodated on No. 4 Forest Road given the constraints identified on the site.

Accordingly, an increase in dwelling density on the subject property to 87 dwellings leaves a potential dwelling yield of 12 dwellings on No. 4 Forest Road upon rectification of the error in the table at clause 6.1(3) of PLEP 2014 whereby the maximum dwelling yield nominated for Sector 5 should be 99 dwellings representing the adopted yield of 32 dwellings per hectare pursuant to the Warriewood Valley Strategic Review Report (WVSRR).

As previously indicated, the increased dwelling yield can be accommodated within the approved building footprint and envelope demonstrating that the dwelling density proposed does not exceed the environmental capacity of the land. Accordingly consent authority can be satisfied that the dwelling density proposed is appropriate for the site is not compromised the reasonable future development potential of No.4 Forest Road.

Under such circumstances, there is no statutory impediment to the granting of consent.

3.2.4 Acid sulfate soils

Pursuant to clause 7.1 of PLEP 2014 the site is identified as Class 5 on the Acid Sulfate Map. Having regard to the applicable considerations we have formed the considered opinion that the additional excavation proposed will not lower the watertable table on any adjoining Class 1, 2, 3 or 4 land below 1m AHD.

3.2.5 Flood planning

Clause 7.3 of PLEP 2014 applies to land at or below the flood planning level. The site is identified as being land within the Risk H3 and H5 Flood Category and subject to an Overland Flow Path – Minor. Pursuant to clause 7.3(3) (3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development:

(a) is compatible with the flood hazard of the land, and

(b) will not significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties, and

(c) incorporates appropriate measures to manage risk to life from flood, and

(d) will not significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses, and

(e) is not likely to result in unsustainable social and economic costs to the community as a consequence of flooding.

In this regard, the modifications sought do not alter the previously approved flood planning outcome for the site.

3.2.6 **Biodiversity**

Pursuant to clause 7.6 of PLEP 2014 the site is identified on Council's Biodiversity Map. Pursuant to clauses 7.6(3) and (4) and (3) before determining a development application for development on land to which this clause applies, the consent authority must consider:

(a) whether the development is likely to have:

(i) any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and

(ii) any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna, and

(iii) any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and

(iv) any adverse impact on the habitat elements providing connectivity on the land, and

(b) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.

Further, development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:

(a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or

(b) if that impact cannot be reasonably avoided by adopting feasible alternatives—the development is designed, sited and will be managed to minimise that impact, or

(c) if that impact cannot be minimised—the development will be managed to mitigate that impact

In this regard, the modifications sought do not alter the previously approved biodiversity outcomes for the site.

3.2.7 Geotechnical hazards

Pursuant to clause 7.7 of PLEP 2014 the south western edge of the site is identified on Council's Geotechnical Hazard Map. In this regard, the modifications sought do not alter the previously approved geotechnical outcomes for the site as detailed in the accompanying addendum letter prepared by Cardno.

3.3 Pittwater 21 Development Control Plan

This policy document came into effect on 1st February 2004 and has been amended on numerous occasions since. Pittwater 21 DCP contains development controls for the design and construction of buildings and the development of land in Pittwater. The proposed development has been assessed against the relevant provisions of Pittwater 21 DCP as outlined in the following sections of this report.

3.3.1 Overview

The following sections of this statement provide a detailed assessment of the residential development against the applicable DCP including draft Amendment No. 16. The land is located within Sector 5 of the Warriewood Valley Release Area.

3.3.2 Locality Statement - Warriewood Valley Land Release Area

The Locality Statement for the Warriewood Valley Land Release Area is as follows:

> *Warriewood Valley is situated at the base of the escarpment, known as Ingleside Chase Reserve, between Mona Vale and Warriewood (see map).*
>
> *First identified as a Release Area in 1997, the Warriewood Valley Release Area previously consisted of 110 hectares including 32.68 hectares of industrial/commercial land and associated community facilities and infrastructure. Two recent reviews have been undertaken firstly the Warriewood Valley Strategic Review 2012 and secondly the Warriewood Valley Strategic Review Addendum Report 2014. The Release Area now includes Buffer Areas 1, 2 and 3, resulting in an area of approximately 190 hectares.*
>
> *Warriewood Valley is primarily a residential area expected to provide a total of 2,451 new dwellings (this figure includes the dwellings approved under the former Part 3A legislation). When completed, it is anticipated to accommodate 6,618 residents (based on an average household occupancy of 2.7 persons per household).*
>
> *The Warriewood Valley Land Release Area is characterised by a mix of residential, retail, commercial, industrial, recreational, and educational land uses.*
>
> *Warriewood Valley continues to be developed as a desirable urban community in accordance with the adopted planning strategy for the area, and will include a mix of low to medium density housing, industrial/commercial development and open space and community services.*
>
> *The creeklines, roads and open space areas will form the backbone of the new community, complemented with innovative water management systems, the natural environment, pedestrian/cycle path network, public transport, and recreation facilities.*

The Warriewood Valley Area is affected by various hazards. identified on various maps within Pittwater LEP 2014.

The Warriewood Release Area includes vegetation areas, threatened species, or areas of natural environmental significance.

A number of identified heritage items are located in Warriewood Valley.

Given the nature of the modifications sought, the consent authority can be satisfied that the development as modified will remain consistent with the desired future character statement as outlined.

3.3.3 Dwelling Density – Warriewood Valley Land Release Area (B2.8)

Outcomes

The density and scale of development reflects the infrastructure and environmental capability of the area. (En, S) The development does not adversely impact on adjoining development. (En, S) A range of lot sizes and dwelling types to cater for a mix of residential development styles.

Controls

Dwelling yields, development densities and developable areas for each sector are outlined in the Warriewood Valley Land Release Planning Framework.

The dwelling yield and residential density proposed has been discussed in detail in section 4.2.4 of this report. The dwelling yield and density have been found to be consistent with the objectives of the standard and the associated statutory considerations.

3.3.4 Section D – Development Type Controls

Provision	Response
D16.1 Character as viewed from a public space	
▪ Achieve the desired future character of the Locality. ▪ To ensure new development responds to, reinforces and sensitively relates to the spatial characteristics of the existing built and natural environment. (En, S, Ec) ▪ To enhance the existing streetscapes and promote a scale and density that is in scale with the height of the natural environment. The visual impact of the built form is secondary to landscaping and vegetation, or in commercial areas and the like, is softened by landscaping and vegetation. (En, S, Ec)	▪ As previously detailed within this report the development satisfies the desired future character of the Warriewood Valley Land Release Area Locality ▪ The development, as modified, will not be discernible within any established streetscape. The development, as modified, will contribute positively to the proposed future streetscape with

Provision	Response
▪ High quality buildings designed and built for the natural context and any natural hazards. (En, S) ▪ Buildings do not dominate the streetscape and are at 'human scale'. Within residential and rural residential areas, buildings fronting Macpherson Street, Warriewood Road, Garden Street and Orchard Street are to give the appearance of being two storey maximum. Buildings fronting all other streets are to give the appearance of being three storey maximum. (S) ▪ To preserve and enhance district and local views which reinforce and protect the Pittwater's natural context. ▪ To enhance the bushland vista of Pittwater as the predominant feature of the landscape with built form, including parking structures, being a secondary component. Access to public places and spaces is clear and defined. (S) ▪ To ensure that development adjacent to public domain elements such as waterways, streets, parks, bushland reserves and other public open spaces, compliments the landscape character, public use and enjoyment of that land. (En, S) **Controls** ▪ Buildings which front the street or creekline corridors must have a street presence and incorporate design elements (such as roof forms, textures, materials, the arrangement of windows, modulation, spatial separation, landscaping etc) that are compatible with any design themes for the locality. ▪ Blank street frontage facades without windows shall not be permitted. ▪ Walls without articulation shall not have a length greater than 8 metres to any street frontage. ▪ Any building facade to a public place must incorporate at least two of the following design features: i. entry feature or portico; ii. awnings or other features over windows; ▪ The bulk and scale of buildings must be minimised. ▪ Garages, carports and other parking structures including hardstand areas must not be the dominant site feature when viewed from a public place. Parking structures should be located behind the front building line, preferably set back further than the primary building, and be no greater in width than 50% of the lot frontage, or 7.5 metres, whichever is the lesser. ▪ Landscaping is to be integrated with the building design to screen the visual impact of the built form. In residential areas, buildings are to give the appearance of being secondary to landscaping and vegetation. ▪ Television antennas, satellite dishes and other telecommunications equipment must be minimised and screened as far as possible from public view. ▪ General service facilities must be located underground. ▪ Attempts should be made to conceal all electrical cabling and the like. No conduit or sanitary plumbing is allowed on facades of	all buildings appropriately articulated and modulated and distributed across the site in response to constraints and opportunity analysis. The buildings will sit within a landscape setting and blend into the vegetated escarpment which forms a backdrop to the site. ▪ The development, as modified, will continue to befree from hazards as detailed with the supporting documentation and will relate appropriately to the adjacent public domain ▪ All buildings will continue to appropriately address the proposed street frontages and incorporate visual stimulating and high quality faced treatments. ▪ There are no blank street frontages. ▪ All walls are appropriately articulated and modulated with visually in testing materials, finishes and façade treatments. ▪ The previously approved basement parking circumstance is maintained. ▪ All building modifications are located behind the front building line and comply with the maximum width requirements as outlined. ▪ The previously approved landscape regime is not altered.

Provision	Response
buildings visible from a public space. ▪ Within the following Sectors and Buffer areas, development directly fronting onto Garden Street, Macpherson Street, Orchard Street, or Warriewood Road, shall appear a maximum of 2 storeys: ▪ Sector 101 ▪ Sector 301, 302, 303 ▪ Sector 501 ▪ Sector 801 ▪ Sector 901A, 901B, 901C, 901F, 901G ▪ Sector 10B ▪ Buffer Area 1b, 1c, 1d, 1e, 1f, 1g, 1h, 1i, 1j, 1k, 1l ▪ Buffer Area 2a ▪ Buffer Area 3b ▪ Development that does not directly front onto Garden Street, Macpherson Street, Orchard Street, or Warriewood Road in the above Sectors and Buffer Areas may appear a maximum of 3 storeys. **Variations –** Nil	
D16.5 Landscaped area for individual allotments	
Land to which this control applies ▪ Land identified as being within the Warriewood Valley Land Release Area Residential Sectors P21DCPBCMDCP057 **Outcomes** ▪ Vegetation is retained and enhanced within the building design to screen the visual impact of the built form. Landscaped areas should be predominately areas of deep soil. Stormwater runoff is reduced, preventing soil erosion and siltation of natural drainage channels. ▪ To conserve significant natural features of the site and contribute to effective management of biodiversity. ▪ The area of site disturbance is minimised. Landscaping enhances and complements the natural environment and surrounding landscape character, reinstates elements of the natural environment, reduces the visual bulk and scale of development, and	

<table>
<tr><th colspan="3">Provision</th><th>Response</th></tr>
<tr><td colspan="3">complements the design of the proposed development.
▪ Warriewood Valley achieves a unified and high quality landscape character that contributes to the sense of place.
▪ To ensure a reasonable level of privacy and amenity is provided within the development site and maintained to neighbouring properties.
▪ Landscaping promotes ecologically sustainable outcomes, maintaining and enhancing visual and environmental qualities, biological diversity and ecological processes. New development is blended into the streetscape and neighbourhood.
▪ A pleasant and safe living environment that is environmentally responsive.
Controls
Landscaped Area
The total landscaped area on individual residential allotments is to be in accordance with the following:</td><td>▪ The previously approved and compliant landscaped area circumstance is maintained..
▪ Such quantum ensures appropriate opportunity to achieve the outcomes of the control as detailed the previously approved landscape plans.</td></tr>
<tr><th>Development</th><th>Minimum percentage (%) of site area</th><th>Minimum dimensions in metres</th><th>Response</th></tr>
<tr><td>▪ Lots less than 9m wide</td><td>▪ 25%</td><td>▪ 3m</td><td>N/A</td></tr>
<tr><td>▪ Lots 9m to 14m wide</td><td>▪ 35%</td><td>▪ 4m</td><td>N/A</td></tr>
<tr><td>▪ Lots greater than or equal to 14m wide</td><td>▪ 45%</td><td>▪ 4m</td><td>N/A</td></tr>
<tr><td>▪ Residential flat buildings</td><td>▪ 25%</td><td>▪ 3m (at ground level)</td><td>N/A</td></tr>
</table>

Provision			Response
▪ Multi dwelling housing	▪ 25%	▪ 3m	N/A
▪ All other development	▪ 45%	▪ 5m	Total across site of 57.91% Complies
▪ Due to the smaller lot sizes in Warriewood Valley and the resultant smaller dimensions of landscaped area, areas intended for landscaping should be predominately areas of deep soil. Deep soil areas are areas of soil unimpeded by buildings or structures. Areas above the ground level cannot be counted toward deep soil area. <u>Residential flat buildings and multi dwelling housing</u> Basement parking should be contained within the building footprint to maximise deep soil areas. Where possible deep soil areas should be co-located with areas of communal open space to provide shade and amenity for residents. <u>Land affected by Split Zoning</u> On lots where there is a split zoning and part of the lot is zoned RE1 Public Recreation, E2 Environmental Conservation or SP2 Infrastructure, the calculation for total deep soil area will be based only on that area not zoned RE1 Public Recreation, E2 Environmental Conservation or SP2 Infrastructure, and will not be based on the site area of the whole lot. <u>Landscaping Requirements</u> Landscaping is to be provided on residential lots as follows: Landscaped areas are to be predominately areas of deep soil to allow the infiltration of rain water to the water table and reduce stormwater runoff. The location of deep soil areas should, where possible, facilitate the retention of existing trees and vegetation. Basement car parking should be contained within the building footprint to maximise areas for deep soil planting, Deep soil areas should be co-located with areas of private open space or communal open space, in the case of residential flat buildings and multi dwelling housing, to provide shade and amenity for residents. For lots fronting Warriewood Road, Macpherson Street and Garden Street at least two canopy trees are to be provided within the front setback. For lots fronting all other streets at least one small tree is to be provided within the front setback. **Variations** Nil.			▪ Noted ▪ Noted. Sufficient soil depths proposed within all communal open space areas to accommodate canopy tree plantings as per landscape plans. ▪ Subject site subdivided along zone boundary with development Lot R3 zoned portion only. ▪ The approved landscape plan prepared by Site Design Studios nominates landscaping of a form, density and species consistent with the control with such landscaping prepared in consultation with the project bushfire, aboricultural and ecological consultants. ▪ Strict compliance is achieved/ maintain.

D16.6 Front building lines

Development	Minimum front setback to articulation zone (metres)	Minimum front setback to garage/ carport (metres)	Minimum front setback to dwelling (metres)	Response
▪ All dwellings, except for those specified elsewhere in this table, fronting Warriewood Road, Garden Street and Macpherson Street	▪ 5	▪ 6.5	▪ 6.5	N/A
▪ All dwellings, except for those specified elsewhere in this table, fronting all other streets	▪ 1.5	▪ 4	▪ 3	N/A
▪ Corner lots, setback to secondary street frontage for all dwellings, except for those specified elsewhere in this table	▪ 1	▪ 2	▪ 2	N/A
▪ Residential flat buildings and multi-dwelling housing fronting Warriewood Road, Garden Street and Macpherson Street	▪ 4	▪ 6.5	▪ 6.5	N/A

▪ Residential flat buildings and multidwelling housing fronting all other streets	▪ 3	▪ 4.5	▪ 4.5	All buildings, as modified, comply with these minimum front setback requirements. Compliance achieved.

Control	Provision	Responses
D16.7 Side and rear building lines		
Outcomes ▪ Achieve the desired future character of the Locality. ▪ The bulk and scale of the built form is minimised. Equitable preservation of views and vistas to and/or from public/private places. (S) ▪ To encourage view sharing through complimentary siting of buildings, responsive design and well positioned landscaping. ▪ To ensure a reasonable level of privacy, amenity and solar access is provided. An attractive streetscape. ▪ Flexibility in the siting of buildings and access. ▪ Vegetation is retained and enhanced to visually reduce the built form. ▪ Consistent setbacks from the buildings to the boundary with the street, creeklines, open space reserves and buffer strips. ▪ Access to the dwelling, parking area and recreation space within individual residential properties. **Controls** ▪ The minimum side and rear setbacks are subject to the incorporation of landscaping required under this DCP. <u>Residential Development</u> Side setback: ▪ For all development, minimum side boundary setbacks are to be in accordance with the following:		

LOT WIDTHS	Attached or Abutting Dwelling	Zero Lot Line Dwelling	Detached Dwelling	Response
Less than 9m	0m on both sides. 0.9m at the end of a row of	0m on zero lot boundary. Length of zero lot line limited to 16m (excludes detached garages on rear loaded lots, including those incorporating secondary dwellings above garage). 0.9m setback applies to the remaining portion of the dwelling. 0.9m at ground floor and 1.2m for any upper levels on other side.	0.9m on both sides. However if lot is burdened by a double storey zero lot wall, the setback on the burdened side is 1.2m.	N/A
9 to 14m	0m at ground floor and 1.5m at upper levels on zero lot boundary. Length of zero lot line is limited to 13m (excludes detached garages on rear loaded lots, including those incorporating secondary dwellings above garage). 0.9m setback applies to remaining portion of the dwelling	0m at ground floor and 1.5m at upper levels on zero lot boundary. Length of zero lot line is limited to 13m (excludes detached garages on rear loaded lots, including those incorporating secondary dwellings above garage). 0.9m setback applies to remaining portion of the dwelling. ▪ 0.9m on other side.	0.9m on one side 0.9m at ground floor and 1.5m for upper levels on other side.	N/A

Greater than 14m and less than 16m			0.9m on one side. 0.9m at ground floor and 1.5m for upper levels on other side.	N/A
Greater than16m			0.9m on one side. 2.5m on other side.	N/A
Residential flat buildings and multi-dwelling housing	▪ As a minimum, the side setback is to be 3m on both sides. ▪ Minimum separation distances for buildings within and adjoining other residential development are: - 12m between habitable rooms/balconies - 9m between habitable and non-habitable rooms - 6m between non-habitable rooms			The previously approved side and rear boundary setback circumstances are maintained.
D16.8 Solar access				
Controls ▪ Windows to the principal living area of the proposal, and windows to the principal living area of adjoining dwellings, are to receive a minimum of three (3) hours of sunlight between 9am and 3pm on June 21st (that is to at least 50% of the glazed area of those windows). ▪ Where the principal living area within an existing dwelling currently receives sunshine during midwinter, any proposed adjacent development is not to reduce that solar access below three (3) hours. ▪ Solar collectors for hot water or electricity shall receive at least 6 hours of sunshine between 9am and 3pm during midwinter. ▪ The existing/proposed private open space within the subject property and the existing/proposed private open space of any adjoining dwellings are to receive a minimum of three (3) hours of sunshine between 9am and 3pm during midwinter. ▪ This shall be a reasonable area giving consideration to existing site constraints and block size. Where the adjoining residential land is vacant, at least 50% of the rear yard area of the adjoining land is to receive sunshine in accordance with this control. ▪ Where a development is undertaken as Integrated Housing (Approval Pathways 2a and 2b – see development control C6.11), 70% of the proposed dwellings are to receive a minimum of three (3) hours of			The modifications sought will not result in any additional shadowing impact.

sunlight between 9am and 3pm on June 21st to the private open space within the subject property and the windows of the principal living area (that is to at least 50% of the glazed area of those windows). ▪ Where an existing structure already impinges upon the solar access of an adjoining property to a greater degree than that specified, any new structures or modifications must maintain that existing solar access as a minimum. Further, Council encourages new structures to reduce the solar impact onto adjoining properties. ▪ Sunshine to clothes drying areas is to be maximised. ▪ Any reference to adjoining buildings also includes separate dwellings on the same site in respect to multiple occupancy developments. **Variations** Nil **Advisory Notes** - Refer to Residential Flat Design Code for solar access requirements for residential flat buildings	

D16.9 Private and Communal Open Space

Outcomes

- Dwellings are provided with a private, usable and well located area of private open space for the use and enjoyment of the occupants.
  Private open space is integrated with the living areas of dwellings.
  Private open space receives sufficient solar access and privacy.
  Private open space is appropriate in design and location for shop top housing.

Controls

Private Open Space

The minimum private open space area for a dwelling is to be in accordance with the following:

Development	Minimum Area sqm	Minimum dimensions	Response
▪ Dwellings on lots less than 9m wide	▪ 16	▪ 3m	N/A
▪ Dwellings on lots between 9m and 14m wide	▪ 20	▪ 4m	N/A
▪ Dwellings on lots	▪ 24	▪ 4m	N/A

greater than 14m wide			
▪ Multi dwelling housing	▪ 16	▪ 4m	All POS areas, associated with the additional/modified apartments are of adequate size and dimension to cater for a range of passive and active recreational activities. Strict compliance achieved.

D16.10 Construction, retaining walls, terracing and undercroft areas	
Outcomes ▪ To achieve the desired future character of the Locality. To protect and minimise disturbance to natural landforms. To encourage building design to respond sensitively to natural topogr aphy. **Controls** ▪ Lightweight construction and pier and beam footings should be used i areas identified on the Biodiversity Map in the Pittwater Local Environmental Plan 2014. ▪ Where retaining walls and terracing are visible from a public place, pr eference is given to the use of sandstone or sandstone like materials. ▪ In the provision of outdoor entertaining areas, preference is given to ti mber decks rather than cut/fill, retaining walls and/or terracing. ▪ Undercroft areas shall be limited to a maximum height of 3.5 metres. Adequate landscaping shall be provided to screen undercroft areas.	No changed to approved circumstance.
D16.11 Fences	
Controls ▪ In all cases, vegetation is preferable over fencing to delineate the property boundary. ▪ Fencing of properties is restricted to side and rear boundaries only and should not detract from the streetscape or adversely impact on residential amenity. ▪ No fencing is permitted forward of the building line of the dwelling. For corner lots, any fencing along the boundary which fronts the secondary street is only permitted behind the front building line. ▪ If fencing exceeds one (1) metre in height and abuts a public road, it must be set back from the boundary a minimum of one metre (in the case of corner lots or lots with more than one frontage this setback may be varied based on merit). This set back area shall be landscaped to screen the fence and soften its appearance from the road. Any fencing must: ▪ allow native animals to move between and to areas of environmental sensitivity and areas of habitat value;	No changed to approved circumstance.

▪ enable outlook from buildings for safety and surveillance; ▪ assist in highlighting entrances and in creating a sense of community identity; ▪ be compatible with facilities in the street frontage area, such as mail boxes and garbage collection areas; and ▪ complement any facilities and landscaping in public areas. Side and rear boundary fencing must not exceed 1.8 metres in height. Fencing must be located on the ground level (existing) of the property boundary, not raised by retaining walls or the like. Where residential lots front/face/abut are located adjacent to Avenues and Sector Streets (e.g. Macpherson, Garden and Orchard Streets, and Warriewood Road), dwelling frontages, pedestrian access and postal addresses are to be maintained to these roads. Corner blocks are exempt from this requirement, where applicable. Fencing adjoining these roads resulting in walled or gated communities is not permitted.	
D16.12 Building colours and materials	
Outcomes ▪ Achieve the desired future character of the Locality. ▪ The development enhances the visual quality and identity of the street scape. (S) ▪ The colours and materials of the development harmonise with the nat ural environment. (En, S) ▪ To provide attractive building facades which establish identity and con tribute to the streetscape. ▪ To ensure building colours and materials compliments and enhances t he visual character its location with the natural landscapes of Pittwater. ▪ The visual prominence of the development is minimised. (S) The development reflects the natural amphitheatre of the locality. (En, S) ▪ Damage to existing native vegetation and habitat is minimised. (En) ▪ Colours and materials harmonise with the escarpment (S) **Controls** ▪ External colours and materials shall be natural tones such as green, brown and dark earthy colours.	No changed to approved colours and materials.

D16.13 Pets and companion animals	
Outcomes ▪ A balance between human needs for pets / companion animals and e nvironmental considerations. **Controls** ▪ The need for pets and companion animals must take into account their relationship with native animals, including endangered species, and their habitat. ▪ Pets should be contained within the owners property and/or dwelling, especially at night to prevent predation on wildlife. ▪ Pets and companion animals must be kept in accordance with the Co mpanion Animals Act 1998 and Council registration as required. **Variations** Nil **Advisory Notes** See Appendix 3 - Warriewood Valley Urban Land Release Planning Content & Criteria for Background Information.	Noted.

4 DESIGN CRITERIA WARRIEWOOD LAND RELEASE - SECTION C

<table>
<tr><th colspan="2">Provision</th><th>Response</th></tr>
<tr><td colspan="3">C1.9 Adaptable housing & accessibility</td></tr>
<tr><td colspan="3">▪ The design of residential development shall meet the criteria of Australian Standard AS 42991995: Adaptable Housing as follows:</td></tr>
<tr><td>Development</td><td>Percentage (%) of adaptable units (rounded up)</td><td>Minimum class under AS 42991995</td></tr>
<tr><td>▪ Residential development in Warriewood Valley</td><td>▪ 25%</td><td>▪ Class B</td></tr>
<tr><td>▪ Seniors Living</td><td>▪ 100%</td><td>▪ Per the requirements of the State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004</td></tr>
<tr><td colspan="2">▪ The development application must be accompanied by certification from an accredited access consultant confirming that the nominated adaptable dwellings are capable of being modified, when required by the occupant, to comply with AS 42991995 Adaptable Housing.
▪ Development shall include the design and construction of works in the public domain to ensure accessibility for the full frontage of the site to any public road and to ensure access to the site from the public domain.
▪ Development within areas subject to flooding must provide for access on land within private ownership. In this regard ramps must not encroach into the public domain.
Variations
▪ Council may consider a variation to the control relating to the construction of works in the public domain where the development is a single dwelling or dual occupancy.</td><td>Response: a compliant quantum of accessible apartments is provided.</td></tr>
</table>

Provision	Response
C5.22 environmental sustainability	
Uses to which this control applies ▪ Amusement centre Boat building and repair facility Business development Commercial premises Educational establishment Entertainment facility Function centre Health services facility Industrial retail outlet Industrial training facility Information and education facility Light industry Public administration building Recreational facility (indoor) Storage premises Vehicle body repair workshop Vehicle repair station Warehouse or distribution centre **Outcomes** ▪ Apply principles and processes that contribute to ecologically sustainable development (ESD). **Controls** ▪ Any development with a gross floor area of 2,000 square metres or more must achieve a minimum four star Green Star GreenStar Design and As Built rating certified rating from the Green Building Council of Australia, where there is an applicable Green Star rating tool. **Variations** ▪ Where it can be demonstrated that the above requirement is unreasonably onerous or where no applicable GreenStar tool exists, it must be demonstrated that the development achieves sustainability outcomes equivalent to a four star GreenStar Design and As Built rating. ▪ Where the GreenStar Design and As Built tool is not utilised to demonstrate the level of sustainability of the proposal, a sustainability report must be submitted with the development application clearly demonstrating how the development addresses sustainability. The issues to be addressed within the sustainability report include, but are not limited to, the following: Management of the development will be coordinated with all stakeholders, ensuring that all are aware of the required sustainable outcomes. Commitment to and incorporation of delivery of sustainable initiatives and performance monitoring. Education of users and stakeholders to foster sustainable behaviour and systems. Increased comfort and wellbeing of the occupant, through ventilation and thermal, visual and acoustic comfort.	N/A

Provision	Response
C6.2 integrated water cycle management	
Outcomes ▪ Development is designed with an integrated approach to water management, addressing water quality and quantity, watercourse and riparian corridor, stormwater and groundwater, and likely impacts from flooding. (Ec, En) Development is designed to minimise the risk posed by flooding and adapt to climate change impacts. (En, Ec, S) Establish a network of multi-functional living creekline corridors particularly Narrabeen Creek, Fern Creek and Mullet Creek for flood conveyance, environmental flows, flora and fauna habitat, water quality improvement, cyclist and pedestrian access, and drainage, linking the Warriewood escarpment with Warriewood Wetlands and Narrabeen Lagoon. (Ec, En, S) Remnant native vegetation along creeklines, escarpment vegetation, and the Warriewood Wetlands, including stands of Swamp Mahogany, Forest and Swamp Oaks, and Angophora woodlands are conserved and restored to provide linkages and stepping stones for wildlife movement. (En) Natural creeklines are wildlife corridors with riparian vegetation, providing a functioning habitat for birds and diverse native flora. (En) A range of aquatic habitats within the creeks are protected and restored (En) Long-term environmental protection of the receiving waters including the Warriewood Wetlands and Narrabeen Lagoon. (En) Various functions are integrated into the multiple use creekline corridor systems of the Warriewood Valley to achieve aesthetic, recreational, environmental and economic benefits. (Ec, En, S) Landscaping enhances the required functions of the creekline corridor and reduces the impact of utilitarian drainage structures on the open space. (Ec, En, S) **Controls** ▪ Water Management Report and Accompanying Plans ▪ A Water Management Report to be submitted with the application must demonstrate how the water cycle will be managed and integrated within the development. ▪ The Water Management Report is to be prepared by appropriately qualified professionals and certified by an experienced and qualified engineer specialising in hydraulics. It is to be in accordance with Council's Warriewood Valley Urban Land Release Water Management Specification (February 2001) and relevant legislation taking into account the Narrabeen Lagoon Flood Study (September 2013 or as amended) and the Pittwater Overland Flow Flood Study (2013 or as amended). Elements for consideration include, but are not limited to: ▪ □ Water sensitive urban design □ Flooding implications including mainstream flooding and overland flow and flood emergency response □ Climate change impacts on flooding and designs of stormwater management infrastructure □ Demonstration that any	The previously approved water cycle management outcomes are not compromised.

Provision	Response
new allotments to be created are above the Flood Planning Area Where a creek passes through/aligns or abuts a sector, buffer area or development site, the development has integrated the creekline corridor requirements into the design of the development The Inner Creekline Corridor is designed and constructed to contain the 1% Annual Exceedence Probability (AEP) flow With the exception of the Inner Creekline Corridor, the water management facilities will remain in private ownership. The maintenance responsibility for this infrastructure remains with the owners of the land/development. The integrated water cycle management scheme must, where relevant, be supplementary to the BASIX requirement to reduce potable water consumption. Stormwater quantity management, including inter-allotment drainage systems and public (existing and/or proposed) stormwater drainage systems ▪ Groundwater impacts and mitigation measures Alterations and additions to a development must consider the existing approved water cycle management already established for the development. ▪ Plans detailing the integrated water cycle management system recommended by the Water Management Report, including a plan detailing the quantum of pervious and impervious areas are to accompany the Water Management Report. Flooding The flood levels are to be determined as part of the Water Management Report. The information to be obtained includes: ▪ 50% Aannual eExceedence pProbability (AEP) flood levels and with climate change impacts; 20% AEP flood levels and with climate change impacts; 1% AEP flood levels and with climate change impacts; Flood Planning Level (FPL) - equal to the 1% AEP flood level plus 500mm freeboard (as defined within Council's Flood Risk Management Policy Appendix 8 of DCP) and with climate change impacts; Probable Maximum Flood (PMF) level and with climate change impacts; Flow velocities for the 1% AEP flood and Probable Maximum Flood and with climate change impacts; and Flood Category and Flood Hazard Classification as defined in Council's Flood Risk Management Policy (Appendix 8) and with climate change impacts. ▪ Likely flood impacts from the development must also be assessed and where required, mitigated. ▪ The filling of land will only be permitted where it can be demonstrated within the Water Management Report that: ▪ There is no net decrease in the floodplain volume of the floodway or flood storage area within the property, for any flood event up to the 1% AEP flood event; and the PMF event -including climate change considerations for both design events; and/or There is no additional adverse flood impact on the subject and surrounding properties and flooding processes for any flood event up to the Probable Maximum Flood (PMF) event (including climate change impacts). ▪ The Water Management Report must identify the minimum floor	The previously approved flood planning levels are maintained.

Provision	Response
level requirements for development in accordance with the Flood Hazard and Flood Category applicable to the proposed land use specified in Appendix 8 of this DCP. ▪ The subdivision of land requires the building of platforms for each additional allotment created to be at or above the Flood Planning Level (plus climate change). The Plan of Subdivision is to include the Flood Planning Level (plus climate change) for each new allotment created. Creekline Corridor ▪ Where a creek passes through/aligns or abuts a sector, buffer area or development site, the creekline corridor is to generally comprise a total width of 100 metres, comprising of a 50 metre wide Inner Creekline Corridor (being 25 metres either side of the centreline of the creek) and an Outer Creekline Corridor 25 metres wide each side of the Inner Creekline Corridor. ▪ The 50 metre wide Inner Creekline Corridor (25m either side of the creekline corridor), to be brought into public ownership, is a corridor that contains the creek, floodway and flora and fauna habitat. The Inner Creekline Corridor is to be designed and constructed to contain the 1% Annual Exceedence Probability (AEP) flow plus climate change. Detailed engineered plans are to be submitted with the application depicting the creek construction. ▪ The 25 metre Outer Creekline Corridor (commonly known as the 'private buffer strip') to be provided on each side of the Inner Creekline Corridor is to be retained in private ownership. The private buffer strip is to be a multifunctional corridor and may contain: ▪ - The pedestrian path/cycleway is to be sited above the 20% AEP flood level to reduce the incidence of flood damage to a manageable level and achieve a satisfactory safety level for regular use. The location of the pedestrian path/cycleway is variable to ensure connectivity with existing sections of the path can be provided and retention of vegetation. The alignment of pedestrian paths/cycleways and associated landscaping must provide adequate sightlines for cyclists. - Water quality control ponds. - Other water quality treatment measures. - Roads and impervious areas may intrude into part of the outer Creekline Corridor but will be subject to merit assessment. ▪ Dwellings, garages and other vertical built structures must not be located within the private buffer strip. ▪ A landscape plan for the Inner and Outer Creekline Corridors is to be prepared and submitted with the application. Extensive stands of Casuarina glauca, groves of Eucalyptus robusta with other native feature trees, an indigenous understorey and ground covers are to comprise a minimum of 75 % of the total creekline corridor area. In areas of low use, native groundcovers should be used as an alternative to lawn. Stormwater Drainage Quantity Management ▪ A piped stormwater drainage system network is to be designed for a 5% AEP flood event (including climate change impacts). A	The previously approved creek line corridor outcomes are maintained. The previously approved stormwater drainage and quality management outcomes are maintained.

Provision	Response
failsafe flood overflow system for flood events greater than a 5% AEP flood is to be provided and managed. Appropriate system blockages are to be included in the stormwater drainage system design. ▪ The stormwater pipe drainage system network is to include private inter-allotment drainage systems to be connected to the public drainage system. Stormwater drainage easements will be required over all inter-allotment drainage systems and where a public stormwater drainage system traverses private property. The required easements are to be shown on the Plan of Subdivision. ▪ Stormwater quantity management design details are to be submitted and taken into account in the integrated water cycle management for the development. Groundwater ▪ The Water Management Report must identify the depth of the groundwater table. If groundwater is to be managed as a result of excavation/basements/stormwater or flood mitigation measures on the proposed development, the groundwater management measures are to be detailed in the report. Alterations and Additions to Existing Development ▪ Alterations and additions to a development must consider the existing approved water cycle management already established for the development particularly water quality, water balance and stormwater detention. ▪ For water management requirements for residential allotments, please refer to Control D6.4. **Variations** The width of this the Outer Creekline Corridor (known as the 'private buffer strip') may be less than 25 metres provided the outcomes of this control are met and subject to this buffer strip having an average 25 metres width. **Advisory Notes** Warriewood Valley Urban Land Release Water Management Specification (February 2001), Narrabeen Lagoon Flood Study (September 2013), and Pittwater Overland Flow Flood Study (2013) are available on Council's website, www.pittwater.nsw.gov.au/flooding. ▪ NSW Office of Water is the approval authority with regards to groundwater. If groundwater impacts are likely as a result of the proposal, the development application will require concurrence from the NSW Office of Water and application will be considered as Integrated Development. ▪ The creek centreline may, as a result of the design, vary within the 50m wide public Inner Creekline Corridor. See Appendix 3 - Warriewood Valley Urban Land Release Planning Context &	

Provision	Response
C6.3 landscape principles	
Outcomes ▪ Landscaping enhances and complements the natural environment and surrounding landscape character, reinstates elements of the natural environment, reduces the visual bulk and scale of development, and complements the design of the proposed development. Remnant bushland and wetland areas are conserved, local indigenous trees, shrubs and groundcover are retained, regenerated and promoted wherever possible. The canopy cover and the habitat value are increased. The natural landscape character of the area is improved. Landscaping promotes ecologically sustainable outcomes, maintaining and enhancing visual and environmental qualities, biological diversity and ecological ▪ processes. A pleasant and safe living environment that is environmentally responsive, resulting in a unified, high quality landscape character and high level of visual amenity that in turn contributes to the sense of place. New development is blended into the streetscape and neighbourhood. **Controls** Landscaping Principles ▪ Promote landscape design and planning as part of a fully integrated approach to site development; Be sensitive to the site attributes and context, such as streetscape character, natural landform, soils, existing vegetation, views, land capability, and drainage; Protect and, where possible, incorporate existing significant trees, remnant vegetation and natural features; Protect and enhance wildlife corridors and fauna habitats; Provide planting schemes that reinforce the framework of endemic canopy trees with supplementary plantings of other suitable understorey and groundcover species. These may include species that have high ornamental qualities and/or provide food and habitat for native fauna and/or have aromatic flowers and foliage. In areas of high sensitivity only locally indigenous tree species should be used for the canopy; Visually integrate the built form of the development into the natural and cultural landscapes of the Warriewood Valley; Manage the micro-climate, through the provision of canopy trees for shade; Maximise landscaped areas for on-site infiltration of stormwater; Integrate and form linkages with parks, reserves and transport corridors; Complement the functions of the street e.g. reinforcing desired traffic speed and behaviour; considering lines of sight for pedestrians, cyclists and vehicles; promoting safety and casual street surveillance; Satisfy maintenance and utility requirements and minimise their visual impact. For example, undesirable visual elements such as blank walls, service areas, loading docks, and electrical sub-stations are adequately screened with shrub and tree plantings of suitable species at appropriate spacings; Paving, structures, fencing and wall materials complement the	The previously approved integrated site landscape regime/ biodiversity/ communal open space outcomes are not compromised. .

Provision	Response
architectural style and finishes of the buildings on the site. ▪ Development must be designed to maximise the restoration, retention and preservation of indigenous trees, shrubs and groundcovers, as well as natural features, including rock features and watercourses. ▪ Integration with Creekline Corridor and Public Open Space ▪ For land adjoining creekline corridors, buffer strips and reserves, preference should be given to local species identified as food sources for native fauna. Refer to species lists contained in the Warriewood Valley Landscape Masterplan and Design Guidelines (Public Domain). ▪ If the development site contains a section of Creekline Corridor, a landscape plan for the Creekline Corridor must be prepared. Details are to include: □ The creek and floodway particularly where the Inner Creekline Corridor is designed and is to be constructed to contain the 1% Annual Exceedence Probability (AEP) flow, □ Any revegetation to facilitate flora and fauna habitat, □ Pedestrian path/cycleway located above the 20% AEP flood level. □ The location of the pedestrian path/cycleway within the Outer Creekline Corridor where practicable, and □ If relevant, the location of any water quality control ponds and other water quality treatment measures. □ Extensive stands of Casuarina glauca, and groves of Eucalyptus robusta with other native feature trees and indigenous understorey and ground covers are to comprise a minimum of 75 % of the total creekline corridor area. In areas of low use, native groundcovers should be used as an alternative to lawn. ▪ The alignments of pedestrian paths/cycleways and associated landscaping must provide adequate sightlines for cyclists. ▪ Dwellings, garages and other vertical built structures must not be located within the private buffer strip (being the 25 metre wide Outer Creekline Corridor beyond the 25 metre wide Inner Creekline Corridor). Roads and impervious areas comprising of a maximum of 25% of the Outer Creekline Corridor area may be permitted subject to a merit assessment. ▪ Landscaping of existing and proposed Public Road Reserves ▪ Planting within the existing or proposed public road reserve is to be in accordance with the Warriewood Valley Landscape Masterplan and Design Guidelines (Public Domain) and the following: □ Street trees are to be planted within the road verge to be placed at 6 metre intervals; □ Species are to comply with the species list in the Warriewood Valley Landscape Masterplan; □ Species selected must not interfere with existing power lines. □ Plantings are to be 35 litre in size with 1 metre x 1 metre hole and backfilled with planting medium. □ Trees are to be staked with 2/50mm x 50mm stakes with hessian tie. □ Street trees are to be planted so as not to obstruct the free passage of pedestrians along the road verge or the future construction of a 1.5 metre footpath where none exists. □ Where possible all existing trees over 3 metres in height are to be retained within the road reserve areas. Such trees are to be protected through perimeter 1.8 metre high temporary fencing during the construction of works. □	

Provision	Response
Grassed areas are to be turfed with Couch species (weed free) to a maximum 4% grade Landscaped Area ▪ Due to the smaller lot sizes in Warriewood Valley and the resultant smaller dimensions of landscaped area, areas intended for landscaping should be predominately areas of deep soil. ▪ Deep soil areas are areas of soil unobstructed by buildings or structures above or below the ground. Areas above the ground level do not contribute towards the deep soil area quantum. ▪ Deep soil zones have important environmental benefits, such as allowing infiltration of rain water to the water table and reduction of stormwater runoff, promoting healthy growth of large trees with large canopies and protecting existing mature trees. In designing and siting dwellings, the following principles should be adhered to: ▪ Areas intended for landscaping should be predominately areas of deep soil, The location of deep soil areas should, where possible, facilitate the retention of existing trees and vegetation. Basement car parking should be contained within the building footprint to maximise areas for deep soil planting, Deep soils areas should be co-located with areas of private open space or communal open space in the case of residential flat buildings and multi dwelling housing to provide shade and amenity for residents. Communal Open Space Area ▪ Areas of communal open space are required to be provided within residential flat buildings and multi dwelling housing developments. ▪ Areas of communal open space should be co-located with deep soils areas to provide shade and amenity for residents. ▪ A landscape plan of communal open space areas is to be prepared, showing connection and utility of this communal open space area for future residents of the development. **Variations** Nil. **Advisory Notes** This control is to complement the related provisions under Pittwater LEP 2014 and Control B4.22 of this DCP. For landscape guidelines associated with creekline or road reserve interface, refer to the Warriewood Valley Release Area Landscape Masterplan and Design Guidelines (Public Domain) 2014 as amended.	

Provision	Response
C6.4 Principles Towards Ecologically Sustainable Development	
Outcomes ▪ An ecologically sustainable environment is developed and/or maintained. Ensure that development is designed on a 'whole of development/site' approach by applying the principles and processes that contribute to Ecological Sustainable Development (ESD). Ensure that the development (including the public domain) has incorporated the Crime Prevention Through Environmental Design (CPTED) principles of surveillance, access control, territorial management and space management control into its design. Maximise access and adaptability of the development including the public domain for all members of the community. The land release development results in a liveable community fostering a strong sense of community and facilitates social interaction among residents. **Controls** Designing for ESD ▪ Development should be designed and located with consideration to orientation, topography, vegetation, microclimate, adjoining development and landscape; aimed at: □ Encouraging passive solar building design □ Minimising greenhouse gas emissions □ Promoting opportunities to monitor consumption performance, such as installation of SMART metering □ Providing safe connections to existing pedestrian/cycleway networks and public transport routes □ Integrating principles of Universal Design. ▪ The selection of building materials should be based on renewable sources, safety and amount of processing, waste output of production, emission of toxic substance or gases into the interior. Timber should be reused or come from sustainable forestry practices. ▪ Improve the indoor environmental quality of occupants by: □ Optimising the thermal comfort of occupants through the zoning of sections that enables individual control of heating and cooling, □ Installing lighting systems and fittings appropriate for the use/activity located in that part of the building(s), resulting in reduced energy consumption, □ Selecting materials and furniture from renewable sources/ minimal emission of toxic substance. □ Sub-metering of building services to enable individual tenancies to facilitate individual monitoring of consumption performance. Integration of CPTED Development is designed to incorporate the following CPTED principles: ▪ Principle 1 – Natural Surveillance Provide opportunities for effective surveillance (natural and technical) to reduce the	The application is accompanied by updated BASIX certificate. The approved ecological sustainable development outcomes are not compromised.

Provision	Response
attractiveness of crime targets. Good surveillance means that people can see what others are doing thereby deterring 'would be offenders' from committing crime in areas with high levels of surveillance. From a design perspective, deterrence can be achieved by (but not limited to): Locating public services in areas of high activity. Providing clear sightlines between public and private spaces. Providing natural surveillance into communal and public areas. Locating entries that are clearly visible from the street. Avoiding blind corners in pathways, stairwells, hallways and carparks. Installation of effective lighting in public spaces that does not produce glare or dark shadows. ▪ Principle 2 – Access Control Physical and symbolic barriers can be used to attract, channel or restrict the movement of people and in turn, minimise opportunities for crime. Effective access control can be achieved by (but not limited to): Creating landscapes/ setting that channel and group pedestrians into target areas or conversely, use vegetation as barriers to deter unauthorised access. Designing public spaces that attract rather than discourage people from gathering. Providing clear entry points and ensuring buildings (or tenancies in buildings) are clearly identified by the street number (in regard to tenancies, unit number). ▪ Solid roller shutters are not permitted as security devices to buildings or tenancies. ▪ Principle 3 – Territorial Reinforcement This principle relies on the users of the spaces or areas feeling that they have some ownership of the public space and are therefore more likely to gather and enjoy that space. Territorial reinforcement can be achieved in the design of the development by: Having distinct transitions and boundaries between the public and private areas. Clearly defining spaces to express a sense of ownership and reduce illegitimate use/entry. Principle 4 – Space Management Public space that is attractive and well maintained is inviting to users and becomes a well-used space. Linked to the principle of territorial reinforcement, space management ensures that the space is appropriately utilised and well cared for. It may include: Creating a cared for image through proper and regular maintenance regimes. Rapid repair of vandalism and graffiti, replacement of furniture and lighting. Encourage design that promotes pride and sense of place for community. Social Environment ▪ New developments and the urban spaces surrounding it should be accessible and useable for all people. ▪ The siting and design of a building to which the general public has access shall comply with Australian Standard AS 14282009.1:Design for access and mobility – General requirements for access – New building work ▪ Developments should be designed and constructed beyond its initial/first use to ensure that building stock is durable and capable of adaptability in the future. The 'whole of development' approach needs to consider the design, construction and materials selection at the outset to encourage adaptability and accessibility and, in	

Provision	Response
turn, maximise the longevity of building stock. ▪ Dwellings should be flexible in their design to facilitate 'ageing in place' and change in lifecycle/circumstance. ▪ Certain residential developments will require provision of adequate communal open spaces to facilitate: Opportunities for residents to meet informally, Opportunities for casual/passive surveillance onto these spaces as well as considering acoustic effects on adjacent dwellings. **Variations** Nil **Advisory Notes** ▪ Certain developments (refer to control 5.2 under Pittwater 21 Development Control Plan Preliminary (Part A)) will require referral to NSW Police where a crime risk assessment will be undertaken, having considered how the design has integrated the CPTED principles within the development. ▪ Control C1.9 prescribes the circumstances when dwellings are to be designed to facilitate adaptable housing in accordance with Australian Standard AS4299-1995: Adaptable Housing. ▪ Control C5.22 prescribes additional sustainability requirements for non-residential development of a particular size. ▪ Control D16.9 prescribes the circumstances when communal open space areas are required as part of a development.	
C6.5 The Road System and Pedestrian and Cyclist Network	
Outcomes ▪ Sustainable transport and travel to, from and within Warriewood Valley together with less use of private motor vehicles. ▪ To facilitate a hierarchy of interconnected streets that give, safe, convenient and clear access within and beyond Warriewood Valley. ▪ To ensure sufficient carriageway and verge widths are provided to allow streets to perform their designated functions within the street network To accommodate public utilities, drainage systems and substantial street tree planting. ▪ To facilitate the alignment of roads fronting areas of public open space. Safety for all road users, particularly pedestrians, cyclists, children and older people. Safe, convenient and direct access by non-motorised means from residences to public transport, employment areas, adjoining sectors, open space, community facilities and other services. Provision of a range of traffic and transport routes throughout the Valley.	

Provision	Response
Controls The Road System ▪ A traffic analysis report and road plans for the sector, buffer area or development sites demonstrating that the objectives within this control will be achieved must be prepared by a suitably qualified professional. The road plans must comply with the relevant specifications and cross sections in Council's Warriewood Valley Roads Masterplan. **Design Requirements** ▪ All roads in Warriewood Valley must be designed with traffic calming devices to lower the vehicle speeds. Options to achieve this may include variation in width and alignment, pavement treatment, enhanced landscaping. The provision of safe crossing areas is required. ▪ The street pattern must provide direct, safe, and convenient pedestrian and cyclist access from housing and employment areas to public transport stops and to areas of open space, services and other facilities. Connectivity within the sector, buffer area or development site is required to ensure the majority of dwellings are within 400 metres walking distance to bus stops. ▪ The street layout and design is to consider opportunities for the retention of existing significant trees with the road reserve where possible. Trees may be incorporated with small, informal spaces that provide opportunities for 'greening of the street'. ▪ Roads and any traffic calming devices in Macpherson Street, Warriewood Road, Ponderosa Parade, Garden Street and Boondah Road must be able to cater for ultra-low floor articulated buses. In order to address these objectives and controls, the Warriewood Valley Roads Masterplan, adopts the following road hierarchy: Sub-arterial Streets - Ponderosa Parade, Macpherson Street, Warriewood Road (east of Macpherson Street), Garden Street and Boondah Road. Collector Streets - Foley Street, Jubilee Avenue, Vineyard Street, Warriewood Road (west of Macpherson Street), Orchard Street, Daydream Street and any new road with traffic volumes 2000 to 5000 vehicles per day. Local Streets - Fern Creek Road and new roads within the sectors servicing up to 2000 vehicles per day. Access Streets – New roads located within sectors servicing less than 300 vehicles per day. Laneways – New roads located within sectors which are not primary street frontages servicing up to less than 300 vehicles per day. Sector Entry Streets - **Primary entrance street to a Sector, Buffer Area or development site.** ▪ Refer to Warriewood Valley Roads Masterplan for the specifications and cross section for each road classification. ▪ Driveway locations on Local Streets and Access Streets are to consider the impact on street trees and on street parking	The previously approved road, traffic and parking outcomes are not compromised as detailed within the addendum letter prepared by John Coady. The development as modified provides appropriately for off-street parking.

Provision	Response
opportunities. **Laneways** ▪ For small lot housing, laneways should be used to provide rear loaded access. Design, dimensions and materials of the laneway should promote a slow speed driving environment distinctively different from a street. ▪ Laneways are to be provided with a suitable level of passive surveillance. ▪ Garbage collection areas are to be incorporated into the design of laneways to ensure access along the laneway is not hindered during garbage collection periods. Garbage bins are to be located in these collection areas only during the collection period. The garbage collection area(s) are not to be used for parking or storage **Temporary Roads** ▪ Where access arrangements have not been constructed in a timely manner, the construction of temporary roads may be permitted to enable an isolated property to develop ahead of the surrounding roads being constructed. ▪ In these circumstances temporary roads are permitted subject to the following criterial being satisfied: The road is to cater for no greater than 300 vehicles per day; A minimum carriageway width of 6m is provided to cater for two-way traffic; The safety of all road users including service and passenger vehicles, pedestrians and cyclists is not compromised by the temporary road; The final road configuration is consistent with the applicable specifications and cross section within the Warriewood Valley Roads Masterplan. ▪ The following information must be submitted in support of a development application proposing a temporary road construction: Engineering design for the road, including details of any necessary water management, drainage and service utility provision requirements; and Traffic report prepared by an appropriately qualified professional demonstrating how the temporary road provides for the safe usage of all road users including service and passenger vehicles, pedestrians and cyclists. **Half Width Road Construction** ▪ Due to the narrow width of some sectors, buffer areas or development sites in Warriewood Valley, it may be necessary for roads to be constructed across the boundary of two adjoining properties. ▪ Where a road is to be constructed along the boundary of two properties, the partial/half width construction of the road is permitted subject to the following criteria being satisfied: A minimum carriageway width of 6m is provided to cater for two-way traffic; The development potential of all adjoining allotments is maintained. The proposed development shall not, render any allotment adjoining or opposite the site of the proposed	N/A N/A N/A

Provision	Response
development incapable of residential development because the allotment would not meet the development standards set out in Pittwater LEP 2014 or the controls set out in this DCP; The safety of all road users including service and passenger vehicles, pedestrians and cyclists is not compromised by the partial road construction; Where the road classification requires a footpath be provided, this is to be provided along the first completed side of the road; The final road configuration is consistent with the applicable specifications and cross section within the Warriewood Valley Roads Masterplan, as amended. ▪ The following information must be submitted in support of a development application proposing partial road construction: Engineering drawings for the partial and full width of the road, including details of any necessary water management, drainage and service utility provision requirements; and A traffic report prepared by an appropriately qualified professional demonstrating how the partial road proposal provides for the safe usage of all road users including service and passenger vehicles, pedestrians and cyclists. **Subdivision adjoining an existing public road** ▪ Where the subdivision adjoins an existing public road reserve, plans are to be submitted for the intersection treatment to the public road reserve and any works within the public road reserve including, road pavement, vertical kerb and gutter, footpaths and cycleways (minimum 1.5m width footpath or a minimum 2.1m width where a cycleway is required). All works associated with the intersection treatment (except those identified under the Warriewood Valley Section 94 Development Contributions Plan as amended) and within the public road reserve are to be carried out at full cost to the developer. **Roads within a Community Title subdivision** ▪ Where a subdivision is to be created under community title, the design and construction of the road and pedestrian network shall provide for full pedestrian and vehicular access and on-road parking shall comply with the relevant specifications and cross section under the Warriewood Valley Roads Masterplan. **Pedestrian and Cyclist Network** ▪ A pedestrian and cyclist network is to be provided in accordance with the Warriewood Valley Landscape Masterplan & Design Guidelines (Public Domain). ▪ The pedestrian/cycleway link should be located off road, where practical. Where a pedestrian/cycleway link is located in: a public reserve, the minimum width is 2.5 metres, the road verge adjacent to the road carriageway, the minimum width is 2.1m. ▪ Within the creekline corridor the pedestrian/cycleway network is be sited above the 20% AEP flood level to reduce the incidence of flood damage to a manageable level and achieve a satisfactory safety level for regular use. The location of the pedestrian path/cycleway is variable to ensure connectivity with existing sections of the path can be provided and to ensure retention of	N/A N/A As approved. No change.

Provision	Response
vegetation. The alignment of the pedestrian/cycleway network must provide adequate sightlines for cyclists. ▪ The pedestrian/cycleway network must be accompanied by appropriate landscaping and vegetation. Details of the proposed landscaping and vegetation must accompany any development application. ▪ Where a pedestrian/cyclist link is identified within or adjoining a sector, buffer area or development site, the applicant is to identify on their development drawings the preferred location for this infrastructure. ▪ Reference should be made to Warriewood Valley Landscape Masterplan & Design Guidelines (Public Domain) for further information. **Variations** Nil. **Advisory Notes** Reference should be made to Council's Warriewood Valley Roads Masterplan, AMCORD Part 2, Design Elements: Physical Infrastructure, and to the Traffic Authority of NSW Guidelines for Traffic Facilities, Part 7.3: Shared Traffic Zones. ▪ In addition to the requirements under the Warriewood Valley Landscape Masterplan & Design Guidelines, the Warriewood Valley Roads Masterplan specifies a requirement for footpaths to be provided along roads of a certain classification. ▪ The pedestrian and cyclist network is funded through developer contributions levied for under the Warriewood Valley Section 94 Plan.	
C6.6 Utilities Services and infrastructure Provision	
Outcomes ▪ Development does not have an adverse impact upon adjoining residential properties. Any adverse impact on environmentally sensitive areas or impacts of differing land uses are mitigated. Landscaped zones provide amenity buffers between incompatible land uses, such as the Warriewood Wetlands and residential areas, non-residential land uses in residential areas, and between light industrial and residential areas. A reasonable level of solar access and visual privacy to residential properties is maintained. Minimise acoustic impacts **Controls** Development adjoining Warriewood Wetlands ▪ A minimum setback of 15 metres is to be provided between any development and the Warriewood Wetlands.	N/A

Provision	Response
▪ Landscaping is to be in accordance with the requirements specified in this control. ▪ Non-residential development within residential areas or commercial/industrial development adjoining residential areas A minimum setback of 10 metres is to be provided between the proposed development and existing development. The following principles are to be considered:- ▪ Solar access to adjoining residences should be maintained, namely: Principal private open space of each dwelling and the principal private open space of any adjoining dwellings are to receive a minimum of 3 hours of sunlight between 9am and 3pm on June 21st. Windows to the principal living area of adjoining dwellings are to receive a minimum of 3 hours of sunlight between 9am and 3pm on June 21st (that is, to at least 50% of the glazed area of those windows), or if already impacted then the cumulative effect is not worsened. ▪ Ensuring that opportunities for direct overlooking into the private open space, recreation areas and living rooms of existing adjoining dwellings are mitigated by: Building layout, landscaping, screening devices or increased spatial separation, Appropriate siting of windows including dimensions and glazed material, Responsive design and siting of elevated decks and verandahs. ▪ Direct views of private open space or any habitable room window within 9m may be restricted (see diagram below) by: Vegetation/landscaping A window sill height 1.7m above floor level, or Offset windows Fixed translucent glazing in any part below 1.7m above floor level, or Solid translucent screens or perforated panels or trellises which have a maximum of 25% openings, and which are: - Permanent and fixed; - Made of durable materials; and - Designed and painted or coloured to blend in with the house. **Treatment of the Landscape Buffer** ▪ The buffer strips are to be extensively landscaped and where possible should incorporate: ▪ Landscaped mounds with mass plantings of native trees and shrubs in suitable locations. Planting should consist of a framework of locally indigenous canopy trees with native shrubs and groundcovers. In areas of low use, native groundcovers should be used as an alternative to lawn. The buffer strips are to contain pedestrian/cycleway paths, with vandalresistant solar lighting, and allow casual surveillance of the path from adjacent buildings. ▪ A landscape plan documenting the proposed landscape treatment and planting species as selected from the Warriewood Valley Release Area Landscape Masterplan and Design Guidelines (Public Domain) as amended, is to be submitted with the Development Application. **Variations** Nil.	Noted and satisfied as previously detailed. Noted and satisfied as previously detailed. Noted and satisfied as previously detailed. Noted and satisfied as previously detailed. Noted and satisfied as previously detailed.

5 SECTION B - RELEVANT CLAUSES

Control	Response
B1.4 Aboriginal Heritage Significance	
▪ If a property, the subject of a development application is identified as possibly meeting any of the criteria for being a potential Aboriginal place or containing an Aboriginal object then additional independent information on the potential heritage significance may be requested. ▪ If a property, the subject of a development application, is in the vicinity of an identified or potential Aboriginal place of heritage significance or Aboriginal object then additional independent information on the potential heritage significance may be requested. ▪ The additional information requested may take the form of a report prepared by a suitably qualified archaeologist, as well as consultation with the NSW Office of Environment and Heritage and appropriate Aboriginal groups. ▪ If an Aboriginal site or relic is discovered, it must be reported to the NSW Office of Environment and Heritage and all works stopped. ▪ Development must conserve the significance of any Aboriginal place of heritage	We rely on the previously approved Aboriginal Heritage Due Diligence Report prepared by Futurepast Pty Limited. This report concludes: *This due diligence assessment concludes that, based on physical inspection, review of previous archaeological investigations in the surrounding area, the location of known sites, ground disturbance and discussions with Metropolitan LALC, the study area has a low potential for Aboriginal heritage sites or objects.* *As a result, the proposal is assessed as being unlikely to have an adverse impact upon the Aboriginal archaeological cultural heritage values of the place.*

Section B6 – Access and car parking requirements

Provision	Response
B6.6 Off-Street Vehicle Parking Requirements – All Development other than Low Density Residential	
Uses to which this control applies Uses to which this control applies Attached dwelling Boarding house Business Development Child care centre Development/subdivision of a sector, buffer area or development site in a Release Area Group home Hospital Hostel Industrial Development Multi dwelling housing Occupation/change of use of an existing premises Other Development Residential flat building Rural industry Semi-detached dwelling Seniors housing Shop top housing Subdivision Tourist and visitor accommodation **Outcomes** An adequate number of parking and service spaces that meets the demands generated by the development.(S) Functional parking that minimises rainwater runoff and adverse visual or environmental impacts while maximising pedestrian and vehicle safety. (En, S) **Controls** **On-site Car Parking Requirements** The minimum number of vehicle parking and service spaces to be provided within the development site for new development and extensions to existing development is to comprise the total of the following: The total number of spaces as set out in TABLE 1 below. Plus the number of on-street parking spaces lost as a direct result of the development due to access and traffic facilities requirements.	The development as modified provides appropriately for off-street car parking as detailed in the accompanying addendum report prepared by John Coady

5.1 State Environmental Planning Policy No. 55 – Remediation of Land

State Environmental Planning Policy No. 55 - Remediation of Land applies to all land and aims to provide for a State-wide planning approach to the remediation of contaminated land.

Clause 7 of SEPP 55 requires Council to consider whether land is contaminated prior to granting consent to carrying out of any development on that land.

The application, as modified, relies on the Preliminary Contamination Report prepared by Cardno Geotech Solutions in support of the appreciate.

5.2 State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development

SEPP 65 requires any development application for residential flat development to be assessed against the 9 principles contained at Schedule 1 of SEPP 65 and the matters contained in the Apartment Design Guide (ADG). This application is also accompanied by the required Design Verification Statement and demonstrates that the development satisfies the Design Principles. We also confirm that the development complies with the clause 30(a), (b) and (c) standards pertaining to car parking, internal area and ceiling heights and to that extent these matters cannot be used as grounds for refusal.

An ADG compliance table is also attached.

5.3 State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 applies to the residential component of the development and aims to encourage sustainable residential development.

A modified BASIX certificate accompanies the development application and demonstrates that the proposal exceeds compliance with the BASIX water, energy and thermal efficiency targets.

6 CONCLUSION

We have again been engaged to prepare an application pursuant to Section 96(AA) of the Act seeking the modification of the consent involving the reconfiguration of 6 x approved 2 and 3 bedroom apartments to create 12 x 2 bedroom apartments. This will change the dwelling mix and increase the total dwelling yield across the development site from 81 to 87. This has also necessitated a change in the location and number of accessible apartments with the additional basement vehicular circulation and bulk storage areas proposed as part of the earlier S96AA application utilised to meet the additional demand for car parking and storage now sought.

The proposed dwelling yield remains within the permissible range prescribed by clause 6.1(3) Pittwater LEP 2014 (PLEP). The proposed increase in dwelling yield does not prevent the orderly and economic use and development of No. 4 Forest Road noting Council's position during the recent Court proceedings that clause 6.1(3) is erroneous in that the maximum dwelling yield should be 99 dwellings for Sector 5 representing the adopted yield of 32 dwellings per hectare pursuant to the Warriewood Valley Strategic Review Report (WVSRR). This error can be corrected at any time by Council or a third party by way of a planning proposal.

Council can be satisfied that the modifications involve minimal environmental impact and the development as modified represents substantially the same development as originally approved. Accordingly, the application is appropriately dealt with by way of Section 96(AA) of the Environmental Planning and Assessment Act 1979 which enables Council as the consent authority to modify a Court issued consent.

The proposed modifications succeed when assessed against the Heads of Consideration pursuant to section 79C of the Environmental Planning and Assessment Act, 1979 as amended. It is considered that the modifications, the subject of this document, is appropriate on merit and is worthy of the granting of development consent.

Greg Boston

B Urb & Reg Plan (UNE) MPIA

Director

ANNEXURE 1

Architect Design Verification Statement

DREW DICKSON ARCHITECTS
www.ddo-australia.com SYDNEY ABU DHABI NEW DELHI CHENGDU

Our ref. 15049DVS03

11 JANUARY 2018

DESIGN VERIFICATION STATEMENT

Section 96 Application
8 Forest Road Warriewood NSW

I hereby confirm that:

The Design Verification Statement dated 1st November 2016 outlined the design quality principals as set out in Part 2 of State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development and the 9 Principles.

There is an increase in density with the addition of six units to the development, which forms the basis of the Section 96 application.

There is no change to the original Design Verification Statement with regards to the design quality principals.

Yours faithfully

Drew Dickson
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ANNEXURE 2

Modified Apartment Design Guide Compliance Table

APARTMENT DESIGN GUIDE ASSESSMENT

The following is a response to section 30(2)(b) State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development. The proposal has considered and responded to the relevant design criteria having regard to the site's context and the characteristics of the location.

This report provides as assessment of the proposal's design response to the objectives specified in the Apartment Design Guide and its relevant design criteria.

The report is structured into 2 parts:

- The first part responds to Part 3 – Siting the Development
- The first part responds to Part 4 – Designing the Building

PART 3 - SITING THE DEVELOPMENT

3A Site Analysis
Objective 3A-1 ▪ Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context
Design Criteria ▪ Each element in the Site Analysis Checklist should be addressed (see Appendix 1)
Response
▪ We rely on the previously approved site analysis plan.

3B Orientation
Objective 3B-1 ▪ Building types and layouts respond to the streetscape and site while optimising solar access within the development
Design Criteria ▪ Buildings along the street frontage define the street, by facing it and incorporating direct access from the street (see figure 3B.1) ▪ Where the street frontage is to the east or west, rear buildings should be orientated to the north ▪ Where the street frontage is to the north or south, overshadowing to the south should be minimised and buildings behind the street frontage should be orientated to the east and west (see figure 3B.2)
Response: ▪ The previously approved building configuration, arrangement and orientation are not altered as a as a consequence of the modifications sought.

3D Communal and Public Open Space	
Objective 3D-1 ▪ An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping	
Design Criteria 1. Communal open space has a minimum area equal to 25% of the site (see figure 3D.3) 2. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)	
Response: The previously approved areas of communal open space are not compromised as a consequence of the modifications sought.	
Design Guidance	**Response**
▪ Communal open space should be consolidated into a well designed, easily identifiable and usable area. ▪ Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions ▪ Communal open space should be co-located with deep soil areas ▪ Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies ▪ Where communal open space cannot be provided at ground level, it should be provided on a podium or roof ▪ Where developments are unable to achieve the design criteria, such as on small lots, sites within business zones, or in a dense urban area, they should: - provide communal spaces elsewhere such as a landscaped roof top terrace or a common room - provide larger balconies or increased private open space for apartments - demonstrate good proximity to public open space and facilities and/or provide contributions to public open space	No change

Objective 3D-2 ▪ Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting	
Design Criteria **Nil**	
Design Guidance	**Response**
▪ Facilities are provided within communal open spaces and common spaces for a range of age groups (see also 4F Common circulation and spaces), incorporating some of the following elements: Seating for individuals or groups Barbecue areas Play equipment or play areas Swimming pools, gyms, tennis courts or common rooms	▪ No changed to approved landscape and communal open space outcomes.
▪ The location of facilities responds to microclimate and site conditions with access to sun in winter, shade in summer and shelter from strong winds and down drafts	▪ No change
▪ Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks	▪ No change

Objective 3D-3 ▪ Communal open space is designed to maximise safety	
Design Criteria **Nil**	
Design Guidance	**Response**
▪ Communal open space and the public domain should be readily visible from habitable rooms and private open space areas while maintaining visual privacy. Design solutions may include: ▪ Bay windows ▪ Corner windows ▪ balconies	▪ No change to previously approved outcomes.

▪ Communal open space should be will lit	▪ Noted and satisfied.
▪ Where communal open space/facilities are provided for children and young people they are safe and contained	▪ N/A

Objective 3D-4

▪ Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood

Design Criteria

Nil

Design Guidance	**Response**
▪ The public open space should be well connected with public streets along at least one edge	▪ No change
▪ The public open space should be connected with nearby parks and other landscape elements	▪ No change
▪ Public open space should be linked through view lines, pedestrian desire paths, termination points and the wider street grid	▪ No change
▪ Solar access should be provided year round along with protection from strong winds	▪ No change
▪ Opportunities for a range of recreational activities should be provided for people of all ages	▪ No change
▪ A positive address and active frontages should be provided adjacent to public open space	▪ No change
▪ Boundaries should be clearly defined between public open space and private areas	▪ No change

Objective 3E-1

▪ Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality

Design Criteria

1.Deep soil zones are to meet the following minimum requirements:

Site area	Minimum dimensions	Deep soil zone (% of site area)
less than 650m²	-	7%
650m² - 1,500m²	3m	
greater than 1,500m²	6m	
greater than 1,500m² with significant existing tree cover	6m	

Design Guidance	Response
On some sites it may be possible to provide larger deep soil zones, depending on the site area and context: ▪ 10% of the site as deep soil on sites with an area of 650m^2 – 1,500m^2 ▪ 15% of the site as deep soil on sites greater than 1,500m^2	▪ The development as modified maintains well in excess of the 15% deep soil landscaped requirement as outlined.
▪ Deep soil zones should be located to retain existing significant trees and to allow for the development of healthy root systems, providing anchorage and stability for mature trees. Design solutions may include: ▪ Basement and sub basement car park design that is consolidated beneath building footprints ▪ Use of increased front and side setbacks ▪ Adequate clearance around trees to ensure long term health ▪ Co-location with other deep soil areas on adjacent sites to create larger contiguous areas of deep soil	▪ The previously approved landscape regime is not altered as a consequence of the modifications sought.
▪ Achieving the design criteria may not be possible on some sites including where: ▪ The location and building typology have limited or no space for deep soil at ground level (e.g. central business district, constrained sites, high density areas, or in centres) ▪ There is 100% site coverage or non-residential uses at ground floor level	▪ N/A
▪ Where a proposal does not achieve deep soil requirements, acceptable stormwater management should be achieved and alternative forms of planting provided such as on structure	▪ N/A

3F Visual Privacy
Objective 3F-1 ▪ Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy
Design Criteria 1. Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries area as follows:

3F Visual Privacy

Building height	Habitable rooms and balconies	Non-habitable rooms
up to 12m (4 storeys)	6m	3m
up to 25m (5-8 storeys)	9m	4.5m
over 25m (9+ storeys)	12m	6m

Previously approved building separation is maintained.

Design Guidance	Response
▪ Generally one step in the built form as the height increases due to building separations is desirable. Additional steps should be careful not to cause a 'ziggurat' appearance	▪ No change to approved outcome
▪ For residential buildings next to commercial buildings, separation distances should be measured as follows: ▪ For retail, office spaces and commercial balconies use the habitable room distances ▪ For service and plant areas use the non-habitable room distances	▪ N/A
▪ New development should be located and oriented to maximise visual privacy between buildings on site and for neighbouring buildings. Design solutions include: ▪ Site layout and building orientation to minimise privacy impacts (see also section 3B Orientation) ▪ On sloping sites, apartments on different levels have appropriate visual separation distances (see figure 3F.4)	▪ Apartments orientated to north, east and west to maximise solar access and natural cross ventilation. Compliant separation distances and visual privacy outcomes maintained.
▪ Apartment buildings should have an increased separation distance of 3m (in addition to the requirements set out in design criteria1) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale and increased landscaping (figure 3F.5)	▪ N/A
▪ Direct lines of sight should be avoided for windows and balconies across corners	▪ Noted and satisfied
▪ No separation is required between blank walls	▪ Noted

3F Visual Privacy	
Objective 3F-2 ▪ Site and building design elements increase privacy without compromising access to light and air and balance outlook and views from habitable rooms and private open space	
Design Guidance	**Response**
Communal open space, common areas and access paths should be separated from private open space and windows to apartments, particularly habitable room windows. Design solutions may include: ▪ Setbacks ▪ Solid or partially solid balustrades to balconies at lower levels ▪ Fencing and/or trees and vegetation to separate spaces ▪ Screening devices ▪ Bay windows or pop out windows to provide privacy in one direction and outlook in another ▪ Raising apartments/private open space above the public domain or communal open space ▪ Planter boxes incorporated into walls and balustrades to increase visual separation ▪ Pergolas or shading devices to limit overlooking of lower apartments or private open space ▪ On constrained sites where it can be demonstrated that building layout opportunities are limited, fixed louvers or screen panels to windows and/or balconies	▪ Noted and satisfied.
▪ Bedrooms, living spaces and other habitable rooms should be separated from gallery access and other open circulation space by the apartment's service areas	▪ Noted and satisfied
▪ Balconies and private terraces should be located in front of living rooms to increase internal privacy ▪ Windows should be offset form the windows of adjacent buildings	▪ Noted and satisfied to all apartments.
▪ Recessed balconies and/or vertical fins should be used between adjacent balconies	▪ Noted and satisfied

3G Pedestrian Access and Entries	
Objective 3G-1 ▪ Building entries and pedestrian access connects to and addresses the public domain	
Design Criteria **Nil**	
Design Guidance	**Response**
▪ Multiple entries (including communal building entries and individual ground floor entries) should be provided to activate the street edge	▪ Previously approved pedestrian entries maintained
▪ Entry locations relate to the street and subdivision pattern and the existing pedestrian network	▪ As approved
▪ Building entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries	▪ As approved
▪ Where street frontage is limited and multiple buildings are located on the site, a primary street address should be provided with clear sight lines and pathways to secondary building entries	▪ N/A

3G Pedestrian Access and Entries	
Objective 3G-2 ▪ Access, entries and pathways are accessible and easy to identify	
Design Guidance	**Response**
▪ Building access areas including lift lobbies, stairwells and hallways should be clearly visible from the public domain and communal spaces	▪ As approved
▪ The design of ground floors and underground car parks minimise level changes along pathways and entries	▪ Noted and satisfied
▪ Steps and ramps should be integrated into the overall building and landscape design	▪ Noted and satisfied.
▪ For large developments 'way finding' maps should be provided to assist visitors and residents (see figure 4T.3)	▪ N/A
▪ For large developments electronic access and audio/video intercom should be provided to manage access	▪ N/A

3G Pedestrian Access and Entries	
Objective 3G-3 ▪ Large sites provide pedestrian links for access to streets and connection to destinations	
Design Guidance	**Response**
▪ Pedestrian links through sites facilitate direct connections to open space, main streets, centres and public transport	▪ N/A
▪ Pedestrian links should be direct, have clear sight lines, be overlooked by habitable rooms or private open spaces of dwellings, be well lit and contain active uses, where appropriate	▪ N/A

3H Vehicle Access	
Objective 3H-1 ▪ Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes	
Design Guidance	**Response**
▪ Car park access should be integrated with the building's overall facade. Design solutions may include: ▪ The materials and colour palette to minimise visibility from the street ▪ Security doors or gates at entries that minimise voids in the facade ▪ Where doors are not provided, the visible interior reflects the facade design and the building services, pipes and ducts are concealed	▪ Integrated basement parking proposed as previously approved.
▪ Car park entries should be located behind the building line	▪ As approved
▪ Vehicle entries should be located at the lowest point of the site minimising ramp lengths, excavation and impacts on the building form and layout	▪ As approved
▪ Car park entry and access should be located on secondary streets or lanes where available	▪ As approved
▪ Vehicle standing areas that increase driveway width and encroach into setbacks should be avoided	▪ As approved
▪ Access point locations should avoid headlight glare to habitable rooms	▪ As approved

3H Vehicle Access	
▪ Adequate separation distances should be provided between vehicle entries and street intersections	▪ As approved
▪ The width and number of vehicle access points should be limited to the minimum	▪ As approved
▪ Vehicle impact of long driveways should be minimised through changing alignments and screen planting	▪ As approved
▪ The need for large vehicles to enter or turn around within the site should be avoided	▪ As approved
▪ Garbage collection, loading and servicing areas are screened	▪ The development as modified provides appropriately for waste storage
▪ Clear sight lines should be provided at pedestrian and vehicle crossings	▪ As approved
▪ Traffic calming devices such as changes in paving material or textures should be used where appropriate	▪ N/A
▪ Pedestrian and vehicle access should be separated and distinguishable. Design solutions may include: ▪ Changes in surface materials ▪ Level changes ▪ The use of landscaping for separation	▪ Noted and satisfied. No conflict.

3J Bicycle and Car Parking

Objective 3J-1

- Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas

Design Criteria

1. For development in the following locations:

   The minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less

   The car parking needs for a development must be provided off street

Response: Complaint off street parking is provided as detailed in the report prepared by John Coady

Design Guidance	Response
▪ Where a car share scheme operates locally, provide car share parking spaces within the	▪ N/A

3J Bicycle and Car Parking	
development. Car share spaces, when provided, should be on site	
▪ Where less car parking is provided in a development council should not provide on street resident parking permits	▪ N/A

3J Bicycle and Car Parking	
Objective 3J-2 ▪ Parking and facilities are provided for other modes of transport	
Design Guidance	**Response**
▪ Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters	▪ Motorbike and scooter parking is available.
▪ Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas	▪ Bicycle parking spaces located within basement area.
▪ Conveniently located charging stations are provided for electric vehicles, where desirable	▪ Noted
Objective 3J-3 ▪ Car park design and access is safe and secure	
Design Guidance	**Response**
▪ Supporting facilities within car parks, including garbage, plant and switch rooms, storage areas and car wash bays can be accessed without crossing car parking spaces	▪ Noted and achieved
▪ Direct, clearly visible and well lit access should be provided into common circulation areas	▪ Noted and achieved
▪ A clearly defined and visible lobby or waiting area should be provided to lifts and stairs	▪ Noted and achieved
▪ For larger car parks, safe pedestrian access should be clearly defined and circulation areas have good lighting, colour, line marking and/or bollards	N/A

3J Bicycle and Car Parking
Objective 3J-4 ▪ Visual and environmental impacts of underground car parking are minimised

3J Bicycle and Car Parking	
Design Guidance	**Response**
▪ Excavation should be minimised through efficient car park layouts and ramp design	▪ Noted and achieved. A single basement parking area proposed.
▪ Car parking layout should be well organised, using a logical, efficient structural grid and double loaded aisles	▪ Noted and achieved
▪ Protrusion of car parks should not exceed 1m above ground level. Design solutions may include stepping car park levels or using split levels on sloping sites	▪ Noted and achieved.
▪ Natural ventilation should be provided to basement and sub basement car parking areas	▪ As approved
▪ Ventilation grills or screening devices for car parking openings should be integrated into the facade and landscape design	▪ As approved
3J Bicycle and Car Parking	
Objective 3J-5 ▪ Visual and environmental impacts of on-grade car parking are minimised	
Design Guidance	**Response**
▪ On-grade car parking should be avoided	▪ No changed to approved outcome
▪ Where on-grade car parking is unavoidable, the following design solutions are used: ▪ Parking is located on the side or rear of the lot away from the primary street frontage ▪ Cars are screened from view of streets, buildings, communal and private open space areas ▪ Safe and direct access to building entry points is provided ▪ Parking is incorporated into the landscape design of the site, by extending planting and materials into the car park space ▪ Stormwater run-off is managed appropriately from car parking surfaces ▪ Bio-swales, rain gardens or on site detention tanks are provided, where appropriate ▪ Light coloured paving materials or permeable paving systems are used and shade trees are planted between every 4-5 parking spaces to reduce increased surface temperatures from large areas of paving	▪ N/A

3J Bicycle and Car Parking	
Objective 3J-6 ▪ Visual and environmental impacts of above ground enclosed car parking are minimised	
Design Guidance	**Response**
▪ Exposed parking should not be located along primary street frontages	▪ No changed to approved outcome
▪ Screening, landscaping and other design elements including public art should be used to integrate the above ground car parking with the facade. Design solutions may include: ▪ Car parking that is concealed behind the facade, with windows integrated into the overall facade design (approach should be limited to developments where a large floor plate podium is suitable at lower levels) ▪ Car parking that is 'wrapped' with other uses, such as retail, commercial or two storey Small Office/Home Office (SOHO) units along the street frontage (see figure 3.J.9)	▪ N/A
▪ Positive street address and active frontages should be provided at ground level	▪ No changed to approved outcome

PART 4 – DESIGNING THE BUILDING

4A Solar and Daylight Access

Objective 4A-1

- To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space

Design Criteria

1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas
2. In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid winter
3. A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter

We confirm that 55 of 72 apartments (76.3%) received 2 hours of solar access to living and private open space areas.

There are no single southerly aspect apartments.

	Response
▪ The design maximises north aspect and the number of single aspect south facing apartments is minimised	▪ Noted and achieved. No single aspect south facing apartments
▪ Single aspect, single storey apartments should have a northerly or easterly aspect	▪ N/A
▪ Living areas are best located to the north and service areas to the south and west of apartments	▪ Noted and achieved
▪ To optimise the direct sunlight to habitable rooms and balconies a number of the following design features are used: ▪ Dual aspect apartments ▪ Shallow apartment layouts ▪ Two storey and mezzanine level apartments ▪ Bay windows	▪ Noted. Compliant solar access achieved to 76.3% of apartments.
▪ To maximise the benefit to residents of direct sunlight within living rooms and private open spaces, a minimum of 1m^2 of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes	▪ Noted. Compliant solar access achieved to 76.3% of apartments.
▪ Achieving the design criteria may not be possible on some sites. This includes: ▪ Where greater residential amenity can be achieved along a busy road or rail line by orientating the	▪ N/A

4A Solar and Daylight Access	
living rooms away from the noise source ▪ On south facing sloping sites ▪ Where significant views are orientated away from the desired aspect for direct sunlight ▪ Design drawings need to demonstrate how site constraints and orientation preclude meeting the design criteria and how the development meets the objectives	
Objective 4A-2 Daylight access is maximised where sunlight is limited	
Design Guidance	**Response**
Courtyards, skylights and high level windows (with sills of 1,500mm or greater) are used only as a secondary light source in habitable rooms	▪ Noted and satisfied
Where courtyards are used: ▪ Used restricted to kitchens, bathrooms and service areas ▪ Building services are concealed with appropriate detailing and materials to visible walls ▪ Courtyards are fully open to the sky ▪ Access is provided to the light well from a communal area for cleaning and maintenance ▪ Acoustic privacy, fire safety and minimum privacy separation distances (see section 3F Visual privacy) are achieved	▪ N/A
Opportunities for reflected light into apartments are optimised through: ▪ Reflective exterior surfaces on buildings opposite south facing windows ▪ Positioning windows to face other buildings or surfaces (on neighbouring sites or within the site) that will reflect light ▪ Integrating light shelves into the design ▪ Light coloured internal finishes	▪ Noted and achieved.

Objective 4A-3 Design incorporates shading and glare control, particularly for warmer months	
Design Guidance	**Response**
A number of the following design features are used:	
▪ Balconies or sun shading that extend far enough to shade summer sun, but allow winter sun to penetrate living areas	▪ Noted
▪ Shading devices such as eaves, awnings, balconies, pergolas, external louvers and planting	▪ Noted
▪ Horizontal shading to north facing windows	▪ N/A
▪ Vertical shading to east and particularly west facing windows	▪ Noted
▪ Operable shading to allow adjustment and choice	▪ Noted
▪ High performance glass that minimises external glare off windows, with consideration given to reduce tint glass or glass with a reflectance level below 20% (reflective films are avoided)	▪ Noted

4B Natural Ventilation	
Objective 4B-1 All habitable rooms are naturally ventilated We confirm that 100% of apartments are naturally cross ventilated	
Design Guidance	**Response**
The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms	▪ Noted and achieved to all living, kitchen and bedroom areas. Bathrooms and ensuites are mechanically ventilated.
Depths of habitable rooms support natural ventilation	▪ Noted and achieved.
The area of unobstructed window openings should be equal to at least 5% of the floor area served	▪ Noted and achieved.
Light wells are not the primary air source for habitable rooms	▪ Noted and achieved.
Doors and openable windows maximise natural ventilation opportunities by using the following design solutions:	▪ Noted and achieved

4B Natural Ventilation	
▪ Adjustable windows with large effective openable areas ▪ A variety of window types that provide safety and flexibility such as awnings and louvers ▪ Windows which the occupants can reconfigure to funnel breezes into the apartment such as vertical louvers, casement windows	

4B Natural Ventilation	
Objective 4B-2 The layout and design of single aspect apartments maximises natural ventilation	
Design Guidance	**Response**
Apartment depths are limited to maximise ventilation and airflow (see also figure 4D.3)	▪ Noted and satisfied.
Natural ventilation to single aspect apartments is achieved with the following design solutions: ▪ Primary windows are augmented with plenums and light wells (generally not suitable for cross ventilation) ▪ Stack effect ventilation / solar chimneys or similar to naturally ventilate internal building areas or rooms such as bathrooms and laundries ▪ Courtyards or building indentations have a width to depth ratio of 2:1 or 3:1 to ensure effective air circulation and avoid trapped smells	▪ N/A

Objective 4B-3
The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents
Design Criteria 1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allow adequate natural ventilation and cannot be fully enclosed 48 of 72 (66.7%) of apartments are naturally cross ventilated.

2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line

Noted and achieved

Design Guidance	Response
The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths	▪ Compliant natural ventilation achieved.
In cross-through apartments external window and door opening sizes/areas on one side of an apartment (inlet side) are approximately equal to the external window and door opening sizes areas on the other side of the apartment (outlet side) (see figure 4B.4)	▪ N/A
Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow	▪ Noted and achieved.
Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow	▪ Noted and achieved.

4C Ceiling Heights

Objective 4C-1

Ceiling height achieves sufficient natural ventilation and daylight access

Design Criteria

Measured from finished floor level to finished ceiling level, minimum ceiling heights are:

Minimum ceiling height for apartment and mixed use buildings	
Habitable rooms	2.7m
Non-habitable	2.4m
For 2 storey apartments	2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area
Attic spaces	1.8m at edge of room with a 30 degree minimum ceiling slope
If located in mixed used areas	3.3m for ground and first floor to promote future flexibility of use

These minimums do not preclude higher ceilings if desired

Design Guidance	Response
Ceiling height can accommodate use of ceiling fans for cooling and heat distribution	▪ Noted and achieved. Min 2.7m ceiling heights to all apartments
4C Ceiling Heights	
Objective 4C-2 Ceiling height increases the sense of space in apartments and provides for well proportioned rooms	
Design Guidance	**Response**
A number of the following design solutions can be used: ▪ The hierarchy of rooms in an apartment is defined using changes in ceiling heights and alternatives such as raked or curved ceilings, or double height spaces ▪ Well proportioned rooms are provided, for example, smaller rooms feel larger and more spacious with higher ceilings ▪ Ceiling heights are maximised in habitable rooms by ensuring that bulkheads do not intrude. The stacking of service rooms from floor to floor and coordination of bulkhead location above non-habitable areas, such as robes or storage, can assist	▪ Noted and achieved.
Objective 4C-3 Ceiling heights contribute to the flexibility of building use over the life of the building	
Design Guidance	**Response**
Ceiling heights of lower level apartments in centres should be greater than the minimum required by the design criteria allowing flexibility and conversion to non-residential uses (see figure 4C.1)	▪ N/A

4D Apartment Size and Layout

Objective 4D-1

The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity

Design Criteria

1. Apartments are required to have the following minimum internal areas:

Apartment type	Minimum internal area
Studio	35m²
1 bedroom	50m²
2 bedroom	70m²
3 bedroom	90m²

The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m² each

A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m² each

All apartments satisfy these minimum area requirements.

2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms

Noted and satisfied

Design Guidance	Response
Kitchens should not be located as part of the main circulation space in larger apartments (such as hallway or entry space)	▪ Noted and achieved.
A window should be visible from any point in a habitable room	▪ Noted and achieved.
Where minimum areas or room dimensions are not met apartments need to demonstrate that they are well designed and demonstrate the usability and functionality of the space with realistically scaled	▪ N/A

4D Apartment Size and Layout	
furniture layouts and circulation areas. These circumstances would be assessed on their merits	

4D Apartment Size and Layout	
Objective 4D-2 Environmental performance of the apartment is maximised	
Design Criteria 1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height Room depths compliant with this guide. 2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window Noted and satisfied.	
Design Guidance	**Response**
Greater than minimum ceiling heights can allow for proportional increases in room depth up to the permitted maximum depths	▪ Noted.
All living areas and bedrooms should be located on the external face of the building	▪ Noted and achieved.
Where possible: ▪ Bathrooms and laundries should have an external openable window ▪ Main living spaces should be oriented toward the primary outlook and aspect and away from noise sources	▪ Noted. Bathrooms and ensuites mechanically ventilated. This is considered acceptable noting that apartment design ensures all kitchens have adjacent window. ▪ Living areas orientated to north, east and west with no adverse noise sources

Objective 4D-3

Apartment layouts are designed to accommodate a variety of household activities and needs

Design Criteria

1. Master bedrooms have a minimum area of 10m^2 and other bedrooms 9m^2 (excluding wardrobe space)

Noted and satisfied.

2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space)

Noted and satisfied.

3. Living rooms or combined living/dining rooms have a minimum width of:
   - 3.6m for studio and 1 bedroom apartments
   - 4m for 2 and 3 bedroom apartments

Noted and satisfied.

4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts.

N/A

Design Guidance	**Response**
Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas	▪ Noted and achieved.
All bedrooms allow a minimum length of 1.5m for robes	▪ Noted and achieved.
The main bedroom of an apartment or a studio apartment should be provided with a wardrobe of a minimum 1.8m long, 0.6m deep and 2.1m high	▪ Noted and achieved.
Apartment layouts allow flexibility over time, design solutions may include: ▪ Dimensions that facilitate a variety of furniture arrangements and removal ▪ Spaces for a range of activities and privacy levels between different spaces within the apartment ▪ Dual master apartments ▪ Dual key apartments *Note: dual key apartments which are separate but on the same title are regarded as two sole occupancy units for the purposes of the Building Code of Australia and for calculating*	▪ Noted and achieved.

the mix of apartments ▪ Room sizes and proportions or open plans (rectangular spaces (2:3) are more easily furnished than square spaces (1:1)) ▪ Efficient planning of circulation by stairs, corridors and through rooms to maximise the amount of usable floor space in rooms	

4E Private Open Space and Balconies

Objective 4E-1

Apartments provide appropriately sized private open space and balconies to enhance residential amenity

Design Criteria

1. All apartments are required to have primary balconies as follows:

Dwelling type	Minimum area	Minimum depth
Studio apartments	4m²	-
1 bedroom apartments	8m²	2m
2 bedroom apartments	10m²	2m
3+ bedroom apartments	12m²	2.4m

The minimum balcony depth to be counted as contributing to the balcony area is 1m

All balconies satisfy this criterion as detailed on plan A-000.

2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m^2 and a minimum depth of 3m.

All ground level apartments have private open space areas that satisfy these criteria.

Design Guidance	**Response**
Increased communal open space should be provided where the number or size of balconies are reduced	▪ N/A
Storage areas on balconies is additional to the minimum balcony size	▪ Noted. Not formally proposed.
Balcony use may be limited in some proposals by: ▪ Consistently high wind speeds at 10 storeys and above ▪ Close proximity to road, rail or other noise sources	▪ Good amenity to balconies afforded.

▪ Exposure to significant levels of aircraft noise ▪ Heritage and adaptive reuse of existing buildings In these situations, Juliet balconies, operable walls enclosed wintergardens or bay windows may be appropriate, and other amenity benefits for occupants should also be provided in the apartments or in the development or both. Natural ventilation also needs to be demonstrated	

Objective 4E-2

Primary private open space and balconies are appropriately located to enhance liveability for residents

Design Guidance	**Response**
Primary open space and balconies should be located adjacent to the living room, dining room or kitchen to extend the living space	▪ Noted and achieved.
Private open spaces and balconies predominantly face north, east or west	▪ Noted and achieved.
Primary open space and balconies should be orientated with the longer side facing outwards or be open to the sky to optimise daylight access into adjacent rooms	▪ Noted and achieved.

4E Private Open Space and Balconies

Objective 4E-3

Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building

Design Guidance	**Response**
Solid, partially solid or transparent fences and balustrades are selected to respond to the location. They are designed to allow views and passive surveillance of the street while maintaining visual privacy and allowing for a range of uses on the balcony. Solid and partially solid balustrades are preferred	▪ Noted and achieved.

4E Private Open Space and Balconies	
Full width full height glass balustrades alone are generally not desirable	▪ Noted and achieved.
Projecting balconies should be integrated into the building design and the design of soffits considered	▪ Noted and achieved.
Operable screens, shutters, hoods and pergolas are used to control sunlight and wind	▪ Noted and provided.
Balustrades are set back from the building or balcony edge where overlooking or safety is an issue	▪ Noted.
Downpipes and balcony drainage are integrated with the overall facade and building design	▪ Noted and achieved.
Air conditioning units should be located on roofs, in basements, or fully integrated into the building design	▪ Noted and will be achieved.
Where clothes drying, storage or air conditioning units are located on balconies, they should be screened and integrated in the building design	▪ Noted.
Ceiling of apartments below terraces should be insulated to avoid heat loss	▪ Noted
Water and gas outlets should be provided for primary balconies and private open space	▪ Noted

Objective 4E-4 Private open space and balcony design maximises safety	
Design Guidance	**Response**
Changes in ground levels or landscaping are minimised	▪ Noted and achieved.
Design and detailing of balconies avoids opportunities for climbing and falls	▪ Noted

4F Common Circulation and Spaces	
Objective 4F-1 Common circulation spaces achieve good amenity and properly service the number of apartments	
Design Criteria 1. The maximum number of apartments off a circulation core on a single level is eight Noted and achieved with a maximum of 8. 2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40 N/A.	
Design Guidance	**Response**
Greater than minimum requirements for corridor widths and/or ceiling heights allow comfortable movement and access particularly in entry lobbies, outside lifts and at apartment entry doors	▪ Noted
Daylight and natural ventilation should be provided to all common circulation spaces that are above ground	▪ Noted and achieved.
Windows should be provided in common circulation spaces and should be adjacent to the stair or lift core or at the ends of corridors	▪ Noted and achieved.
Longer corridors greater than 12m in length from the lift core should be articulated. Design solutions may include: ▪ A series of foyer areas with windows and spaces for seating ▪ Wider areas at apartment entry doors and varied ceiling heights	▪ Noted and satisfied.
Design common circulation spaces to maximise opportunities for dual aspect apartments, including multiple core apartment buildings and cross over apartments	▪ Noted and achieved.
Achieving the design criteria for the number of apartments off a circulation core may not be possible. Where a development is unable to achieve the design criteria, a high level of amenity for common lobbies, corridors and apartments should be demonstrated, including: ▪ Sunlight and natural cross ventilation in apartments ▪ Access to amply daylight and natural	▪ N/A

4F Common Circulation and Spaces	
ventilation in common circulation spaces ▪ Common areas for seating and gathering ▪ Generous corridors with greater than minimum ceiling heights ▪ Other innovative design solutions that provide high levels of amenity	
Where design criteria 1 is not achieved, no more than 12 apartments should be provided off a circulation core on a single level	▪ N/A
Primary living room or bedroom windows should not open directly onto common circulation spaces, whether open or enclosed. Visual and acoustic privacy from common circulation spaces to any other rooms should be carefully controlled	▪ Noted and achieved.

4F Common Circulation and Spaces	
Objective 4F-2 Common circulation spaces promote safety and provide for social interaction between residents	
Design Guidance	**Response**
Direct and legible access should be provided between vertical circulation points and apartments entries by minimising corridor or gallery length to give short, straight, clear sight lines	▪ Noted and achieved.
Tight corners and spaces are avoided	▪ Noted and achieved.
Circulation spaces should be well lit at night	▪ Noted and achieved.
Legible signage should be provided for apartment numbers, common areas and general wayfinding	▪ Noted and achieved.

4F Common Circulation and Spaces	
Incidental spaces, for example space for seating in a corridor, at a stair landing, or near a window are provided	▪ Noted and achieved.
In large developments, community rooms for activities such as owners corporation meetings or resident use should be provided and are ideally co-located with communal open space	▪ N/A
Where external galleries are provided, they are more open than closed above the balustrade along their length	▪ N/A

4G Storage

Objective 4G-1

Adequate well designed storage is provided in each apartment

Design Criteria

1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:

Dwelling type	Storage size volume
Studio apartments	4m³
1 bedroom apartments	6m³
2 bedroom apartments	8m³
3+ bedroom apartments	10m³

At least 50% of the required storage is to be located within the apartment

Response: Noted and achieved for all apartments

Design Guidance	**Response**
Storage not located in apartments is secure and clearly allocated to specific apartments	▪ Noted and achieved
Storage is provided for larger and less frequently accessed items	▪ Noted and achieved.
Storage space in internal or basement car parks is provided at the rear or side of car spaces or in cages so that allocated car parking remains accessible	▪ Noted and achieved.

4G Storage	
If communal storage rooms are provided they should be accessible from common circulation areas of the building	▪ N/A
Storage not located in an apartment is integrated into the overall building design and is not visible from the public domain	▪ Noted and achieved.

4H Acoustic Privacy	
Objective 4H-1 Noise transfer is minimised through the siting of buildings and building layout	
Design Guidance	**Response**
Adequate building separation is provided within the development and from neighbouring buildings/adjacent uses (see also section 2F Building separation and section 3F Visual privacy)	▪ Compliant spatial separation maintained.
Window and door openings are generally orientated away from noise sources	▪ No significant noise sources.
Noisy areas within buildings including building entries and corridors should be located next to or above each other and quieter areas next to or above quieter areas	▪ Noted and achieved.
Storage, circulation areas and non-habitable rooms should be located to buffer noise from external sources	▪ Noted and generally achieved.
The number of party walls (walls shared with other apartments) are limited and are appropriately insulted	▪ Noted and achieved.
Noise sources such as garage doors, driveways, service areas, plant rooms, building services, mechanical equipment, active communal open spaces and circulation areas should be located at least 3m away from bedrooms	▪ Noted and achieved.

Objective 4H-2
Noise impacts are mitigated within apartments through layout and acoustic treatments

Design Guidance	Response
Internal apartment layout separates noisy spaces from quiet spaces, using a number of the following design solutions: ▪ Rooms with similar noise requirements are grouped together ▪ Doors separate different use zones ▪ Wardrobes in bedrooms are co-located to act as sound buffers	▪ Noted and achieved.
Where physical separation cannot be achieved noise conflicts are resolved using the following design solutions: ▪ Double or acoustic glazing ▪ Acoustic seals ▪ Use of materials with low noise penetration properties ▪ Continuous walls to ground level courtyards where they do not conflict with streetscape or other amenity requirements	▪ N/A

4J Noise and Pollution

Objective 4J-1

In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings

Design Guidance	Response
To minimise impacts the following design solutions may be used: ▪ Physical separation between buildings and the noise or pollution source ▪ Residential uses are located perpendicular to the noise source and where possible buffered by other uses ▪ Non-residential buildings are sited to be parallel with the noise source to provide a continuous building that shields residential uses and communal open spaces ▪ Non-residential uses are located at lower levels vertically separating the residential component from the noise or pollution source. Setbacks to the underside of residential floor levels should increase relative to traffic volumes and other noise sources	▪ Noted and achieved in all circumstances.

4J Noise and Pollution	
▪ Building should respond to both solar access and noise. Where solar access is away from the noise source, non-habitable rooms can provide a buffer ▪ Where solar access is in the same direction as the noise source, dual aspect apartments with shallow building depths are preferable (see figure 4J.4) ▪ Landscape design reduces the perception of noise and acts as a filter for air pollution generated by traffic and industry	
Achieving the design criteria in this Apartment Design Guide may not be possible in some situation due to noise and pollution. Whee developments are unable to achieve the design criteria, alternatives may be considered in the following areas: ▪ Solar and daylight access ▪ Private open space and balconies ▪ Natural cross ventilation	▪ N/A

4J Noise and Pollution	
Objective 4J-2 Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission	
Design Guidance	**Response**
Design solutions to mitigate noise include: ▪ Limiting the number and size of openings facing noise sources ▪ Providing seals to prevent noise transfer through gaps ▪ Using double or acoustic glazing, acoustic louvers or enclosed balconies (wintergardens) ▪ Using materials with mass and/or sound insulation or absorption properties e.g. solid balcony balustrades, external screens and sofits	▪ Noted. Acceptable noise attenuation achieved through building design.

4K Apartment Mix	
Objective 4K-1 A range of apartment types and sizes is provided to cater for different household types now and into the future	
Design Guidance	**Response**
A variety of apartment types is provided	▪ 1, 2 and 3 bedroom apartments provided with limited demand for studio and 1 bedroom apartments in this particular area of Warriewood Valley.
The apartment mix is appropriate, taking into consideration: ▪ The distance to public transport, employment and education centres ▪ The current market demands and projected future demographic trends ▪ The demand for social and affordable housing ▪ Different cultural and socioeconomic groups	▪ Apartment mix to meet market demand.
Flexible apartment configurations are provided to support diverse household types and stages of life including single person households, families, multi-generational families and group households	▪ Noted and achieved.
Objective 4K-2 The apartment mix is distributed to suitable locations within the building	
Design Guidance	**Response**
Different apartment types are located to achieve successful facade composition and to optimise solar access (see figure 4K.3)	▪ Noted and achieved.
Larger apartment types are located on the ground or roof level where there is potential for more open space and on corners where more building frontage is available	▪ Noted.

4L Ground Floor Apartments	
Objective 4L-1 Street frontage activity is maximised where ground floor apartments are located	
Design Guidance	**Response**
Direct street access should be provided to ground floor apartments	▪ Noted and achieved where practical.
Activity is achieved through front gardens, terraces and the facade of the building. Design solutions may include: ▪ Both street, foyer and other common internal circulation entrances to ground floor apartments ▪ Private open space is next to the street ▪ Doors and windows face the street	▪ Noted and satisfied
Retail or home office spaces should be located along street frontages	▪ N/A
Ground floor apartment layouts support small office home office (SOHO) use to provide future opportunities for conversion into commercial or retail areas. In these cases provide higher floor to ceiling heights and ground floor amenities for easy conversion	▪ N/A

Objective 4L-2 Design of ground floor apartments delivers amenity and safety for residents	
Design Guidance	**Response**
Privacy and safety should be provided without obstructing casual surveillance. Design solutions may include: ▪ Elevation of private gardens and terraces above the street level by 1-1.5m (see figure 4L.4) ▪ Landscaping and private courtyards ▪ Windows sill heights that minimise sight lines into apartments ▪ Integrating balustrades, safety bars or screens with the exterior design	▪ Noted and achieved. Good levels of causal surveillance opportunity.

Solar access should be maximised through: ▪ High ceilings and tall windows ▪ Trees and shrubs that allow solar access in winter and shade in summer	▪ Noted and satisfied

4M Facades	
Objective 4M-1 Buildings facades provide visual interest along the street while respecting the character of the local area	
Design Guidance	**Response**
Design solutions for front building facades may include: ▪ A composition of varied building elements ▪ A defined base, middle and top of buildings ▪ Revealing and concealing certain elements Changes in texture, material, detail and colour to modify the prominence of elements	▪ Noted and satisfied. Refer to schedule of finishes and design statement.
Building services should be integrated within the overall facade	▪ Noted and achieved.
Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. Design solutions may include: ▪ Well composed horizontal and vertical elements ▪ Variation in floor heights to enhance the human scale ▪ Elements that are proportional and arranged in patterns ▪ Public artwork or treatments to exterior blank walls ▪ Grouping of floors or elements such as balconies and windows on taller buildings	▪ Noted and achieved. Refer to design statement
Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights	▪ Noted and achieved.
Shadow is created on the facade throughout the day with building articulation, balconies and deeper window reveals	▪ Noted and achieved.

4M Facades	
Objective 4M-2 Buildings functions are expressed by the façade	
Design Guidance	**Response**
Building entries should be clearly defined	▪ As approved
Important corners are given visual prominence through a change in articulation, materials or colour, roof expression or changes in height	▪ N/A
The apartment layout should be expressed externally through facade features such as party walls and floor slabs	▪ Noted and achieved.

4N Roof Design	
Objective 4N-1 Roof treatments are integrated into the building design and positively respond to the street	
Design Guidance	**Response**
Roof design relates to the street. Design solutions may include: ▪ Special roof features and strong corners ▪ Use of skillion or very low pitch hipped roofs ▪ Breaking down the massing of the roof by using smaller elements to avoid bulk ▪ Using materials or a pitched form complementary to adjacent buildings	As approved
Roof treatments should be integrated with the building design. Design solutions may include: ▪ Roof design proportionate to the overall building size, scale and form ▪ Roof materials compliment the building ▪ Service elements are integrated	▪ As approved

4N Roof Design	
Objective 4N-2 Opportunities to use roof space for residential accommodation and open space are maximised	
Design Guidance	**Response**
Habitable roof space should be provided with good levels of amenity. Design solutions may include: ▪ Penthouse apartments ▪ Dormer or clerestory windows ▪ Openable skylights	▪ As approved
Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations	▪ Noted and achieved.

Objective 4N-3 Roof design incorporates sustainability features	
Design Guidance	**Response**
Roof design maximises solar access to apartments during winter and provides shade during summer. Design solutions may include: ▪ the roof lifts to the north ▪ eaves and overhangs shade walls and windows from summer sun	▪ As approved.
Skylights and ventilation systems should be integrated into the roof design	▪ Noted.

4O Landscape Design	
Objective 4O-1 Landscape design is viable and sustainable	
Design Guidance	**Response**
Landscape design should be environmentally sustainable and can enhance environmental performance by incorporating:	▪ Refer to landscape plan. Noted and achieved.

4O Landscape Design	
▪ diverse and appropriate planting ▪ bio-filtration gardens ▪ appropriately planted shading trees ▪ areas for residents to plant vegetables and herbs ▪ composting ▪ green roofs or walls	
Ongoing maintenance plans should be prepared	▪ Refer to approved landscape plan/ condition
Microclimate is enhanced by: ▪ appropriately scaled trees near the eastern and western elevations for shade ▪ a balance of evergreen and deciduous trees to provide shading in summer and sunlight access in winter ▪ shade structures such as pergolas for balconies and courtyards	▪ As approved
Trees and shrub selection considers size at maturity and the potential for roots to compete (see Table 4)	▪ As approved
Objective 4O-2 Landscape design contributes to the streetscape and amenity	
Design Guidance	**Response**
Landscape design responds to the existing site conditions including: ▪ Changes of levels ▪ Views ▪ Significant landscape features including trees and rock outcrops	▪ Refer to approved landscape plan. Satisfied.
Significant landscape features should be protected by: ▪ Tree protection zones (see figure 4O.5) ▪ Appropriate signage and fencing during construction	▪ As above
Plants selected should be endemic to the region and reflect the local ecology	▪ Refer to approved landscape plan and certification.

4P Planting on Structures	
Objective 4P-1 Appropriate soil profiles are provided	
Design Guidance	**Response**
Structures are reinforced for additional saturated soil weight	▪ As approved
Soil volume is appropriate for plant growth, considerations include: ▪ Modifying depths and widths according to the planting mix and irrigation frequency ▪ Free draining and long soil life span ▪ Tree anchorage	▪ Refer to approved landscape plan/ condition.
Minimum soil standards for plant sizes should be provided in accordance with Table 5	▪ Refer to approved landscape plan/ condition.

4P Planting on Structures	
Objective 4P-2 Plant growth is optimised with appropriate selection and maintenance	
Design Guidance	**Response**
Plants are suited to site conditions, considerations include: ▪ Drought and wind tolerance ▪ Seasonal changes in solar access ▪ Modified substrate depths for a diverse range of plants ▪ Plant longevity	▪ As approved
A landscape maintenance plan is prepared	▪ Refer to approved landscape plan/ condition.
Irrigation and drainage systems respond to: ▪ Changing site conditions ▪ Soil profile and the planting regime Whether rainwater, stormwater or recycled grey water is used	▪ Refer to approved landscape plan/ condition.

4P Planting on Structures	
Objective 4P-3 Planting on structures contributes to the quality and amenity of communal and public open spaces	
Design Guidance	**Response**
Building design incorporates opportunities for planting on structures. Design solutions may include: ▪ Green walls with specialised lighting for indoor green walls ▪ Wall design that incorporates planting ▪ Green roofs, particularly where roofs are visible from the public domain ▪ Planter boxes Notes: structures designed to accommodate green walls should be integrated into the building facade and consider the ability of the facade to change over time	▪ Refer to approved landscape plan. Satisfied.

4Q Universal Design	
Objective 4Q-1 Universal design features are included in apartment design to promote flexible housing for all community members	
Design Guidance	**Response**
Developments achieved a benchmark of 20% of the total apartments incorporating the Liveable Housing Guideline's silver level universal design features	▪ Noted.
Objective 4Q-2 A variety of apartments with adaptable designs are provided	
Design Guidance	**Response**
Adaptable housing should be provided in accordance with the relevant council policy	▪ Compliance achieved.
Design solutions for adaptable apartments include:	▪ Noted and achieved

4Q Universal Design	
▪ Convenient access to communal and public areas ▪ High level of solar access ▪ Minimal structural change and residential amenity loss when adapted ▪ Larger car parking spaces for accessibility ▪ Parking titled separately from apartments or shared car parking arrangements	

Objective 4Q-3 Apartment layouts are flexible and accommodate a range of lifestyle needs	
Design Guidance	**Response**
Apartment design incorporates flexible design solutions which may include: ▪ Rooms with multiple functions ▪ Dual master bedroom apartments with separate bathrooms ▪ Larger apartments with various living space options ▪ Open plan 'loft' style apartments with only a fixed kitchen, laundry and bathroom	▪ Appropriate flexibility achieved.

4R Adaptive Reuse	
Objective 4R-1 New additions to existing buildings are contemporary and complementary and enhance an area's identify and sense of place	
Design Guidance	**Response**
Design solutions may include: ▪ New elements to align with the existing building ▪ Additions that complement the existing character, siting, scale, proportion, pattern, form and detailing ▪ Use of contemporary and complementary	▪ N/A

4R Adaptive Reuse	
materials, finishes, textures and colours	
Additions to heritage items should be clearly identifiable from the original building	▪ N/A
New additions allow for the interpretation and future evolution of the building	▪ N/A

4R Adaptive Reuse	
Objective 4R-2 Adapted buildings provide residential amenity while not precluding future adaptive reuse	
Design Guidance	**Response**
Design features should be incorporated sensitively into adapted buildings to make up for any physical limitations, to ensure residential amenity is achieved. Design solutions may include: ▪ Generously sized voids in deeper buildings ▪ Alternative apartment types when orientation is poor ▪ Using additions to expand the existing building envelope	▪ N/A
Some proposals that adapt existing buildings may not be able to achieve all of the design criteria in this Apartment Design Guide. Where developments are unable to achieve the design criteria, alternatives could be considered in the following areas: ▪ Where there are existing higher ceilings, depths of habitable rooms could increase subject to demonstrating access to natural ventilation, cross ventilation (when applicalbe0 and solar and daylight access (see also sections 4A Solar and daylight access and 4B Natural ventilation) ▪ Alternatives to providing deep soil where less than the minimum requirement is currently available on the site ▪ Building and visual separation – subject to demonstrating alternative design approaches to achieving privacy ▪ Common circulation ▪ Car parking	▪ N/A

4R Adaptive Reuse	
▪ Alternative approaches to private open space and balconies	

4S Mixed Use	
Objective 4S-1 Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement	
Design Guidance	**Response**
Mixed use development should be concentrated around public transport and centres	▪ N/A
Mixed use developments positively contribute to the public domain. Design solutions may include: ▪ Development addresses the street ▪ Active frontages are provided ▪ Diverse activities and uses ▪ Avoiding blank walls at the ground level ▪ Live/work apartments on the ground floor level, rather than commercial	▪ N/A

Objective 4S-2 Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents	
Design Guidance	**Response**
Residential circulation areas should be clearly defined. Design solutions may include: ▪ Residential entries are separated from commercial entries and directly accessible from the street ▪ Commercial service areas are separated from residential components ▪ Residential car parking and communal facilities are separated or secured ▪ Security at entries and safe pedestrian routes are provided ▪ Concealment opportunities are provided	▪ N/A

Landscaped communal open space should be provided at podium or roof levels	▪ N/A

4T Awnings and Signage	
Objective 4T-1 Awnings are well located and complement and integrate with the building design	
Design Guidance	**Response**
Awnings should be located along streets with high pedestrian activity and active frontages	▪ N/A
A number of the following design solutions are used: ▪ Continuous awnings are maintained and provided in areas with an existing pattern ▪ Height, depth, material and form complements the existing street character ▪ Protection from the sun and rain is provided ▪ Awnings are wrapped around the secondary frontages of corner sites ▪ Awnings are retractable in areas without an established pattern	▪ N/A
Awnings should be located over building entries for building address and public domain amenity	▪ N/A
Awnings relate to residential windows, balconies, street tree planting, power poles and street infrastructure	▪ N/A
Gutters and down pipes should be integrated and concealed	▪ N/A
Lighting under awnings should be provided for pedestrian safety	▪ N/A

Objective 4T-2 Signage responds to the context and desired streetscape character	
Design Guidance	**Response**
Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development	▪ No signage proposed.
Legible and discrete way finding should be provided for larger developments	
Signage is limited to being on and below awnings and a single facade sign on the primary street frontage	

4U Energy Efficiency	
Objective 4U-1 Development incorporates passive environmental design	
Design Guidance	**Response**
Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access)	▪ Noted and achieved.
Well located, screened outdoor areas should be provided for clothes drying	▪ Noted

4U Energy Efficiency	
Objective 4U-2 Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer	
Design Guidance	**Response**
A number of the following design solutions are used: ▪ The use of smart glass or other technologies on north and west elevations ▪ Thermal mass in the floors and walls of north facing rooms is maximised	▪ Noted.

4U Energy Efficiency	
▪ Polished concrete floors, tiles or timber rather than carpet ▪ Insulated roofs, walls and floors and seals on window and door openings ▪ Overhangs and shading devices such as awnings, blinds and screens	
Provision of consolidated heating and cooling infrastructure should be located in a centralised location(e.g. the basement)	▪ Approved basement plant rooms maintained

Objective 4U-3 Adequate natural ventilation minimises the need for mechanical ventilation	
Design Guidance	**Response**
A number of the following design solutions are used: ▪ Rooms with similar usage are grouped together ▪ Natural cross ventilation for apartments is optimised ▪ Natural ventilation is provided to all habitable rooms and as many non-habitable rooms, common areas and circulation spaces as possible	▪ Noted and achieved.

4V Water Management and Conservation	
Objective 4V-1 Portable water use is minimised	
Design Guidance	**Response**
Water efficient fittings, appliances and wastewater reuse should be incorporated	▪ Refer to BASIX certificate
Apartments should be individually metered	▪ As above
Rainwater should be collected, stored and reused on site	▪ As above
Drought tolerant, low water use plants should be used within landscaped areas	▪ As above

4V Water Management and Conservation	
Objective 4V-2 Urban stormwater is treated on site before being discharged to receiving waters	
Design Guidance	**Response**
Water sensitive urban design systems are designed by a suitably qualified professional	▪ As approved
A number of the following design solutions are used: ▪ Runoff is collected from roofs and balconies in water tanks and plumbed into toilets, laundry and irrigation ▪ Porous and open paving materials is maximised ▪ On site stormwater and infiltration, including bio-retention systems such as rain gardens or street tree pits	▪ As approved

Objective 4V-3 Flood management systems are integrated into site design	
Design Guidance	**Response**
Detention tanks should be located under paved areas, driveways or in basement car parks	▪ As approved
On large sites parks or open spaces are designed to provide temporary on site detention basins	▪ As approved

4W Waste Management	
Objective 4W-1 Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	
Design Guidance	**Response**
Adequately sized storage areas for rubbish bins should be located discreetly away from the front of	▪ Noted and achieved.

4W Waste Management	
the development or in the basement car park	
Waste and recycling storage areas should be well ventilated	▪ Noted and achieved.
Circulation design allows bins to be easily manoeuvred between storage and collection points	▪ Noted and achieved.
Temporary storage should be provided for large bulk items such as mattresses	▪ Noted and provided.
A waste management plan should be prepared	▪ As approved
4W Waste Management	
Objective 4W-2 Domestic waste is minimised by providing safe and convenient source separation and recycling	
Design Guidance	**Response**
All dwellings should have a waste and recycling cupboard or temporary storage area of sufficient size to hold two days worth of waste and recycling	▪ Noted. Conditioned.
Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core	▪ Noted and achieved.
For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses	▪ Noted and achieved.
Alternative waste disposal methods such as composting should be provided	▪ Noted. Matter for body corporate for above ground level apartments.

4X Building Maintenance	
Objective 4X-1 Building design detail provides protection from weathering	
Design Guidance	**Response**
A number of the following design solutions are used: ▪ Roof overhangs to protect walls ▪ Hoods over windows and doors to protect openings ▪ Detailing horizontal edges with drip lines to avoid staining of surfaces ▪ Methods to eliminate or reduce planter box leaching ▪ Appropriate design and material selection for hostile locations	▪ Noted and generally achieved.
Objective 4X-2 Systems and access enable ease of maintenance	
Design Guidance	**Response**
Window design enables cleaning from the inside of the building	▪ Noted and achieved.
Building maintenance systems should be incorporated and integrated into the design of the building form, roof and facade	▪ Noted and achieved.
Design solutions do not require external scaffolding for maintenance access	▪ Noted and achieved.
Manually operated systems such as blinds, sunshades and curtains are used in preference to mechanical systems	▪ Noted and achieved.
Centralised maintenance, services and storage should be provided for communal open space areas within the building	▪ Noted and achieved.

4X Building Maintenance	
Objective 4X-3 Material selection reduces ongoing maintenance costs	
Design Guidance	**Response**
A number of the following design solutions are used: ▪ Sensors to control artificial lighting in common circulation and spaces ▪ Natural materials that weather well and improve with time such as face brickwork ▪ Easily cleaned surfaces that are graffiti resistant ▪ Robust and durable materials and finishes are used in locations which receive heavy wear and tear, such as common circulation areas and lift interiors	▪ Noted and adopted. Refer to approved schedule of materials and finishes.