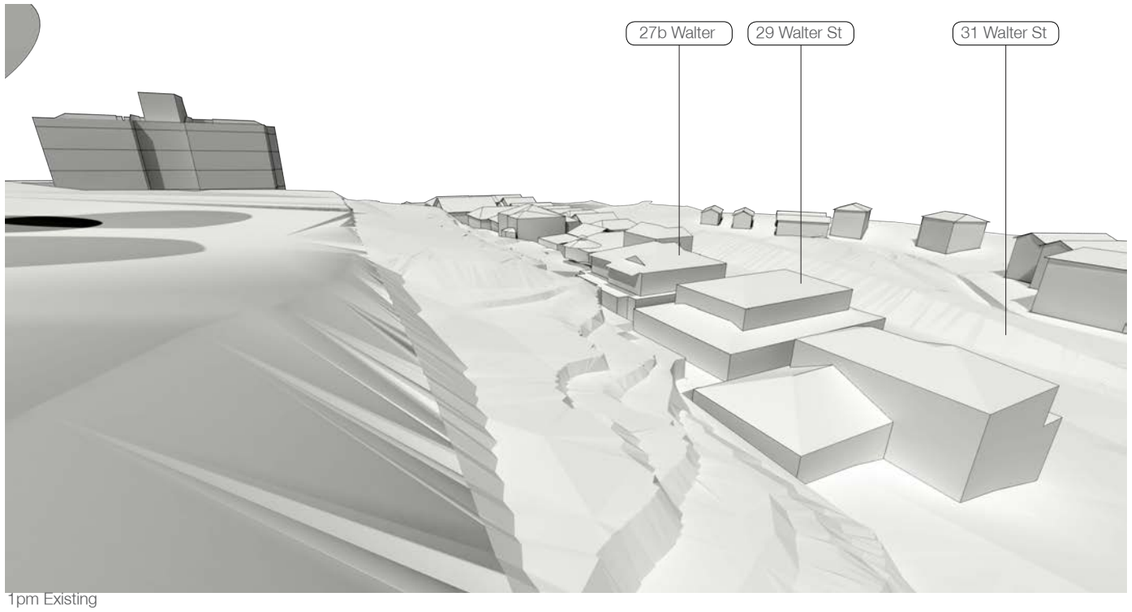
4.5 Walter Street Analysis - 22 September



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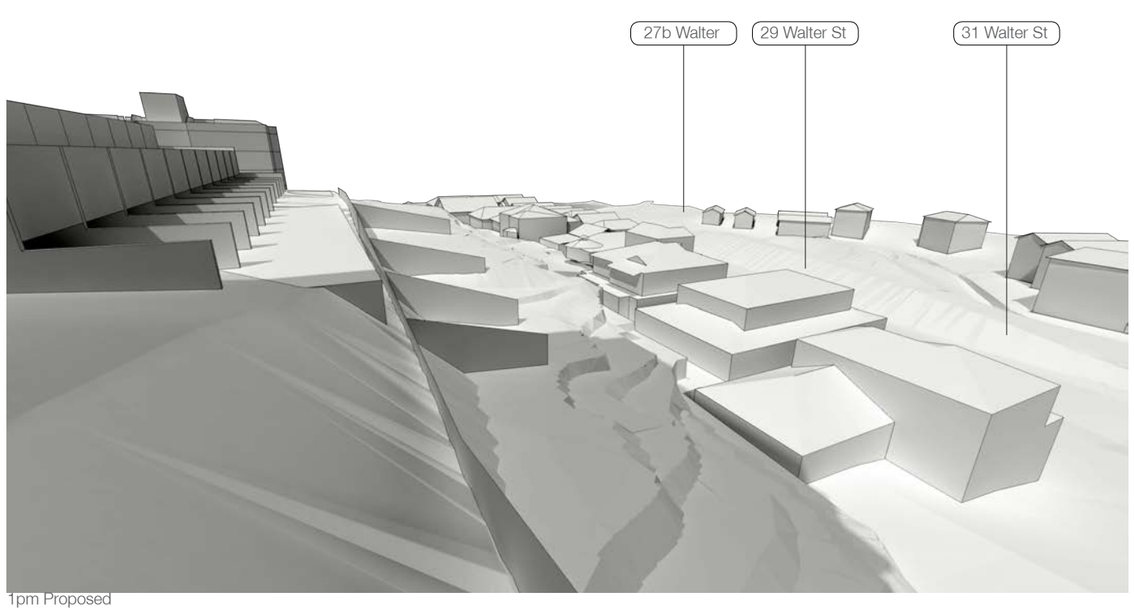
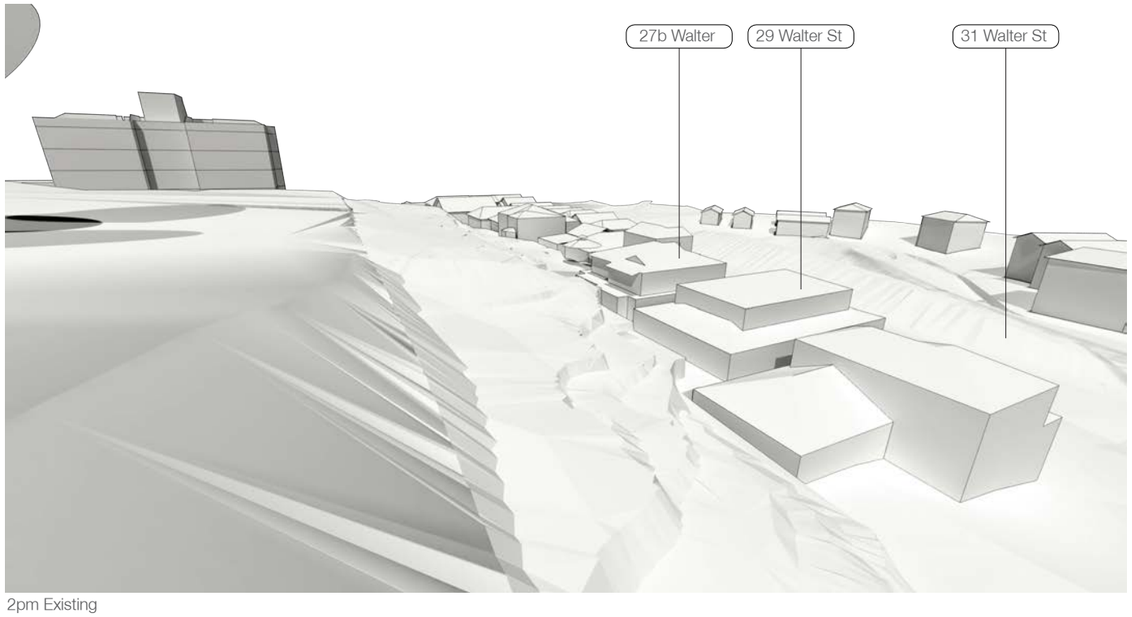
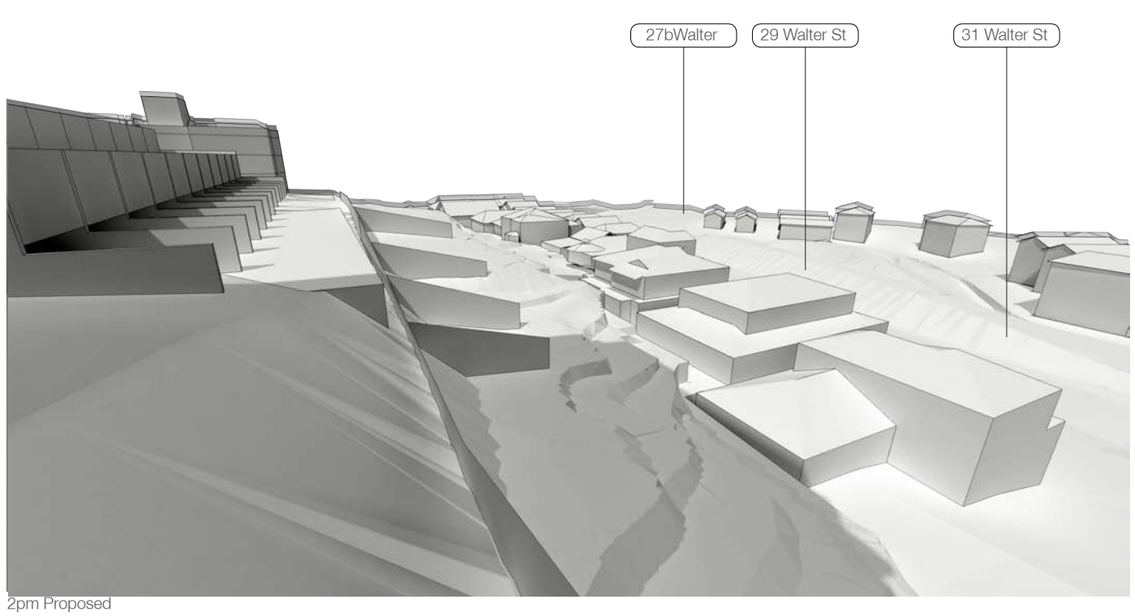


1pm Proposed

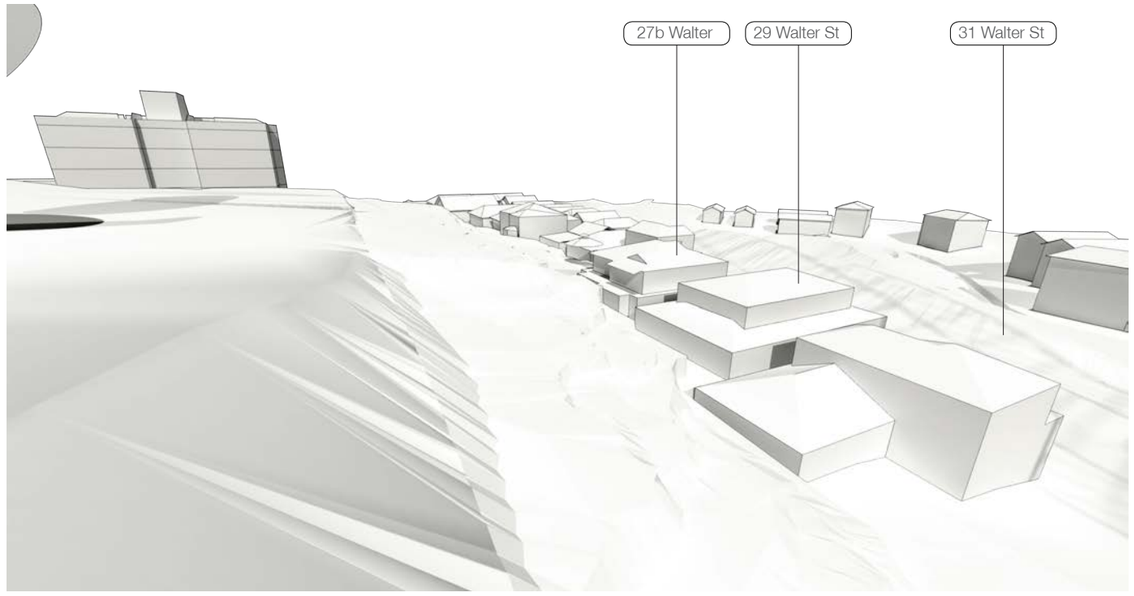


2pm Existing

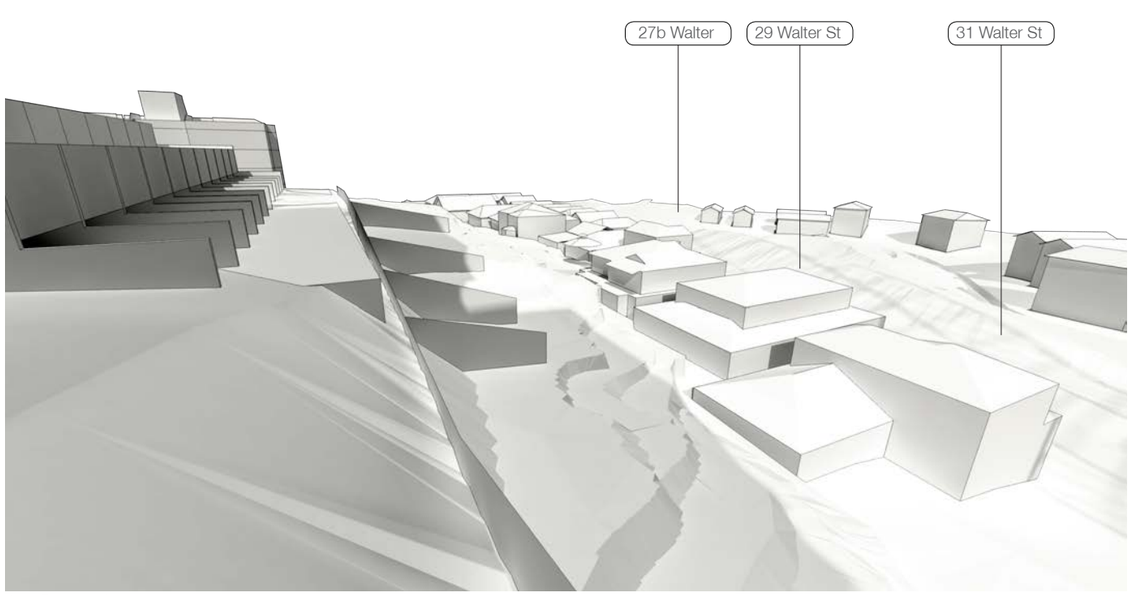


2pm Proposed

4.5 Walter Street Analysis - 22 September



3pm Existing



3pm Proposed

At the Equinox the existing features of the site (vegetation and topography) already cause overshadowing to the rear of the Walter Street properties.

The concept plan has negligible impact on the properties of Walter Street on the Equinox with the exception of No. 31 Walter Street, which is slightly overshadowed between 12pm and 1pm by Block E at the property's rear.

5.1 View Analysis

01 View across the Gore Hill Freeway from Naremburn - 14 March 2013 Scheme B

01 View across the Gore Hill Freeway from Naremburn - September 2013 Revised Scheme

02 View From Richmond Avenue - 14 March 2013 Scheme B

02 View From Richmond Avenue - September 2013 Revised Scheme

5.1 View Analysis

03 View from Edward Street - 14 March 2013 Scheme B

03 View from Edward Street - September 2013 Revised Scheme

04 View from the corner of Richmond Avenue & Artarmon Road - 14 March 2013 Scheme B

04 View from the corner of Richmond Avenue & Artarmon Road - September 2013 Revised Scheme

5.1 View Analysis

05 View from the corner of Artarmon Road and Scott Street - 14 March 2013 Scheme B

05 View from the corner of Artarmon Road and Scott Street - September 2013 Revised Scheme

06 View from Walter Street - 14 March 2013 Scheme B

06 View from Walter Street - September 2013 Revised Scheme

5.1 View Analysis

07 View from the corner of Small Street and Willoughby Road - 14 March 2013 Scheme B

07 View from the corner of Small Street and Willoughby Road - September 2013 Revised Scheme

08 View from Willoughby Incinerator - 14 March 2013 Scheme B

08 View from Willoughby Incinerator - September 2013 Revised Scheme

5.1 View Analysis

09 View from Artarmon Reserve - 14 March 2013 Scheme B

09 View from Artarmon Reserve - September 2013 Revised Scheme

10 View between no. 14 and 16 Salisbury Road - 14 March 2013 Scheme B

10 View between no. 14 and 16 Salisbury Road - September 2013 Revised Scheme

5.1 View Analysis

11 View from the corner of Onyx Road and Sydney St (Conservation area) - 14 March 2013 Scheme B

11 View from the corner of Onyx Road and Sydney St (Conservation area) - September 2013 Revised Scheme

12 View from 58 Artarmon Road (Conservation area) - 14 March 2013 Scheme B

12 View from 58 Artarmon Road (Conservation area) - September 2013 Revised Scheme

5.1 View Analysis

13 View the corner of Artarmon Road and Smith Road - 14 March 2013 Scheme B

13 View from 25 Burra Road (Conservation area) - September 2013 Revised Scheme

14 View the corner of Artarmon Road and Smith Road - 14 March 2013 Scheme B

14 View the corner of Artarmon Road and Smith Road - September 2013 Revised Scheme

5.2 View Analysis - Summary

As previously stated in the Environmental Assessment (March 2013), any development on the site will be visible due to its positioning at the edge of a ridgeline. As part of the refinement of the Concept Plan, including the reduction in the scale and height of the buildings, the view analysis has been completed and compared against the previous Environmental Assessment Concept Plan, issued in March 2013.

The comparison clearers indicates the improvements to key views, particularly the local views from Edward Street, the Artarmon Road and Richmond Avenue. Longer views from Small Street and the Artarmon Reserve have also been improved by the reduction in heights to Blocks B, E and G.

For the purposes of the PPR two render images have been prepared (shown on page 11) that illustrate the positive impact greater architectural resolution can have to the site's capacity to further address the visual impact.


01 Edward Street


03 Smal Street


03 Onyx Road


04 Artarmon Road


05 Small Street


06 Artarmon Road


07 Naremburn


08 Artarmon Road


09 Artarmon Reserve


10 Burra Road


11 Richmond Avenue


12 Walter Street


13 Salisbury Road

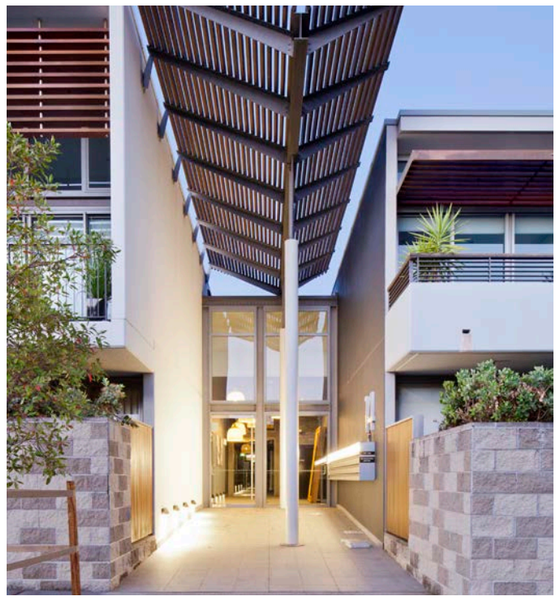

14 Artarmon Road and Smith Road

6.1 SEPP 65 Compliance - Principles

Principle 01: Context

Good design responds and contributes to its context. Context can be defined as the key natural and built features of an area.

New buildings should be contributing to the quality and identity of the area whether it be desirable current character or desired future character.



The Channel 9 site on Artarmon Road, Willoughby, is unique. Sitting within a predominantly residential context the existing commercial uses is out of character with both its surrounding built form and land use contexts. The existing site and its facilities are relics of a time when television was a new communication medium requiring warehouse space, radio dishes, transmission towers and 24 hour activity. As such, the suburban setting of Willoughby in the 1950-60s has allowed the studio to operate and thrive.

Today, television production has changed, as has the suburb of Willoughby. The move to digital technology has made the majority of the analogue infrastructure redundant, while the volumes of space required to stage the 'frame of the box' is no longer necessary, as production has moved off site and internationally. As the physical space required to stage television has decreased, the development pressure on the surrounding residential context has increased.

Willoughby is no longer a quiet suburban setting but rather a growing inner-suburb of Sydney, well located near the CBD and other regionally significant centres. The area is well serviced by public transport, a wide variety open spaces, leisure and recreation destinations, and retail services. The once suburban character of the surrounding context has evolved as detached dwellings sit amongst duplexes, apartment buildings, retail businesses and high street commercial enterprises, as well as significant public transport infrastructure, hospitals and regional recreation facilities. Today, Willoughby is a mixed-use built environment, which has a High Street in the form of Willoughby Road and a diverse residential offering ranging from individual dwellings to multi-unit buildings.

The future use of the site within Willoughby needs to establish a positive contribution to the existing surrounding context. The key drivers for these changes include:

- Replacing the existing land use, which no longer requires the existing Willoughby location, with a more appropriate use and level of activity that makes better use of a large contiguous land parcel
- Provide higher density living that contributes to a more sustainable city, while delivering a diversity of housing choice within a context of predominantly detached and semi-detached dwellings, encouraging greter social mix

The type and extent of change proposed by the plan is similar to that achieved within the context of the adjoining Castle Vale development directly to the east of the site. At the time of development the Castle Vale development would've appeared incongruous with the surrounding context.

Since its development in the 1970's, Castle Vale now sits comfortably within the built form of the area. Ranging from two storey terraces to 7-storey residential apartment buildings, Castle Vale represents that our suburban structure is robust enough to deal with higher levels of density than the standard suburban house.

The transitions at Castle Vale are well managed. The larger buildings are located within the folds of the topography, whilst the and smaller buildings are positioned at the edges to provide a transition between the pedestrian environment and existing dwellings. The development makes space for significant landscaped edges and provides a limited amount of communal open space.

Key features of the concept plan include;

- Locating larger buildings deep within the site to limit the visibility of the built form and mitigate impacts from over-shadowing and over-looking,
- Incorporating the provision of significant public open space in the form two parks, including a linear space along Aratarmon Road (3,250m^2) and an internal park (1,160m^2), which is also publicly accessible
- Provision of new publicly accessible roads, pedestrian and bicycle routes that extend through the site from the surrounding street network,
- Reconnects the land-locked public reserve at the southern boundary of the site with the community for the first time since the site's development as a television studio,
- Incorporates a range of housing typologies from terrace houses to apartments (exact mix of 1, 2 and 3 bed to be determined at application stage),
- Allows for the staging of the site to accommodate practical site construction constraints, &
- Delivers a number of development parcels that will help achieve a diversity of building types and styles, which can be potentially delivered by a variety of different developers and architects.

The concept plan recognises the site importance as a major redevelopment site located within close proximity to existing services and held within a single ownership. The site has a role to play regionally in delivering new housing, creating greater housing choice, and fostering private sector investment. However, we also recognise that a balance must be struck between meeting housing demand at a regional level at the expense of the amenity of the local community.

6.1 SEPP 65 Compliance - Principles

Principle 02: Scale

Good design provides an appropriate scale in terms of the bulk and height that suits the scale of the street and the surrounding building.

Scale requires a considered response to the scale of the existing development and or proposed bulk and height that achieves the scale identified for the desired future character of the area.

The desired future character of the site in regard to scale is difficult to determine. Willoughby Council's planning controls and strategic planning documents fail to identify or nominate a future use for the site beyond 'Commercial Television'. As the site comes to the end of its economic life the 'desired future character' for the site needs to be defined in the absence of appropriate planning controls. This document has sought to provide a response for this site to the existing and future character of Willoughby through its planned redevelopment.

A site of this size and configuration requires a robust and inclusive discussion about 'scale'. Throughout this project and the preparation of this document it has been our objective to appropriately manage the scale of development so that the transition between new development and the large variety of existing buildings, ranging from single-storey dwellings to 7-storey apartment buildings, and public spaces ranging from steeply sloping roadways to densely vegetated open space, can be appropriately reflected in the concept plan.

Informed by these contextual drivers we believe the appropriate scale of development should include;

- Locating 2-storey terrace houses along Richmond Avenue,
- Maintaining a 10m vegetated built form setback along Richmond Avenue to enable the retention of the existing trees,
- Locating a new 25m x 130m, 3,250m^2 public park on the corner of Artarmon Road and Richmond Avenue,
- Second internal public park, 58mx 20x (1,160m^2) access via an internal loop road and recieving passive surveillance from a number of development sites
- Providing an appropriately scaled and landscaped public road and pedestrian network with bike routes,
- Creating 10m deep vegetated setbacks along the southern boundary, responding to the scale of buildings and adjoining properties,
- Creating vegetated setbacks ranging from 10m to 16m from the eastern boundary, responding to the adjoining Castle Vale development, and
- Locating basement car parking entries within the site boundary to ensure that they do not visually dominate public interfaces.

Internal scale has been managed by implementing and achieving SEPP65 compliance objectives. These objectives relate to;

- Achieving required minimum distances between individual buildings or appropriately managing potential overlooking by locating living areas away from each other,
- Ensuring adequate and appropriate sunlight penetration to residential dwellings,
- Managing overshadowing within and beyond the site to achieve required hours of daylight penetration in mid-winter,
- Ensuring that new buildings do not adversely impact both new internal and existing adjoining residential privacy,
- Limiting overall building widths to achieve appropriate levels of cross ventilation and sun-light penetration,

The proposed development includes;

- 1 x 3,300m^2 public park
- 1 x 1,160 m^2
- 1 x 12 level apartment building
- 2 x 10 level apartment building
- 1 x 5 level apartment buildings
- 26 x 2 level + attic space terrace houses

It is our opinion that the concept plan achieves the following;

- Appropriately manages scale at the site's edges, adjoining existing built form, public roads and public open space,
- Understands and appropriately contemplates the visual bulk of buildings when seen from a distance,
- Provides an appropriate quantum of development within the site when considered in a broader suburban and sub-regional (North Shore) context,
- Suggests a desirable future character that strikes a balance between the needs of the immediate context, natural environment, future and existing residents, and the broader Sydney Metropolitan community, and
- Contributes an appropriate number of dwellings given the size and location of the site, and the pressure and demand for new housing.

6.1 SEPP 65 Compliance - Principles

Principle 03: Built Form

Good design achieves an appropriate built form for a site and the building's purpose, in terms of building alignments, proportions, building type and the manipulation of building elements.

Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

The scale of the individual development parcels have been established to ensure;

- Buildability in regards to staging of construction,
- The character and variation in design can be achieved across the site, if deemed desirable,
- A variety of site sizes to ensure diversity of development by providing opportunities for builders and developers of multiple scales, &
- Proportions and geometry to achieve general efficiency.

The proposed building envelopes enable SEPP65 principles to be achieved while allowing for generous balcony spaces. Overall building heights make allowances for minimum required internal volumes while providing the opportunity to manipulate external levels to achieve appropriate separation between the public and private domain. In addition, the built forms proposed and the relative gross building areas attached allow for the incorporation of significant building articulation to be developed as part of future development applications.

Collectively the envelopes create built form that steps-up from Artarmon Road in the north, Castle Vale in the east, and Richmond Avenue in the west to a maximum building height of 12-storeys at the southern boundary, adjacent to the Council Reserve and transmission tower.

While the transmission tower has never be seen as a precedent for height, the location of a tall residential building within this portion of the site ensures that there is limited impact, both perceived and real, from either an amenity, over-shadowing or visual bulk perspective.

Extensive visual analysis has been conducted throughout the development of options. This analysis has considered both the immediate context and broader contextual visual impact of development on the site. In the evolution of the options the building forms, depths and orientation were manipulated, stretched, reduced in height and broken up to achieve a massing arrangement that recognises its visual prominence, without compromising the opportunity presented by the site.

New internal publicly accessible roads are designed to allow for street trees, dual carriageway and on-street parking, while there is differentiation between roads both in width and surface treatment to ensure a visual hierarchy. It is our opinion that the concept plan delivers building mass at an appropriate scale, making relevant reflections to development within and surrounding the site to achieve an excellent outcome that mitigates potential impacts and offer a range of benefits existing and future residents.

Principle 04: Density

Good design has a density appropriate for a site and its context, in terms of floor space yields (or number of units or residents).

Appropriate densities are sustainable and consistent with the existing density in the area, or are consistent with the desired future density. Sustainable densities respond to the regional context, availability of infrastructure, public transport, community facilities and environmental quality.

This site is well located with regards to existing infrastructure. The proximity of a number of high frequency public transport services, in the form of Artarmon Station and the Willoughby Road Bus corridor, is a unique and valuable asset that supports the arguments for higher development densities.

Given the Sydney Metropolitan Strategy's housing targets for 2036 and the ambition of delivering a substantial proportion of the housing numbers within the existing suburban network, this site is well placed to help achieve those goals and objectives.

The site's features that make it an ideal candidate to deliver greater housing densities and housing choice include;

- Excellent connections to a variety of public transport modes,
- Proximity to regional parklands and recreational facilities,
- Edge of settlement location, between the Gore Hill Freeway and adjacent open space, and the established residential suburb of Artarmon
- Single ownership and future availability of the site, and its ability to deliver a significant number of new dwellings,
- Opportunity to deliver a variety of dwelling types across the site with minimal impact on surrounding properties
- Close proximity to local and regional shopping destinations
- Easy access to employment area, ranging from suburban CBD environments such as Chatswood, through to light industrial environments such as Artarmon, and the Sydney CBD
- Existing road network able to support scale of proposed development without any major changes to infrastructure

Based on our understanding of the site, the context and the proposed scale of development it is our opinion that the potential impacts can be addressed and managed. In this regard the preferred option achieves the following;

- Appropriate management of sunlight access to adjoining properties,
- Mitigation of peak-hour traffic loads that fit within the capacity of the existing road network,
- Resolution of vehicular movement patterns across and through the site from Artarmon Road and Richmond Avenue,

Impacts of any development, independent of density levels, which can't be addressed by this site include public schools and peak hour bus capacity to the city. Both of these cases identify issues that need to be addressed at a broader state strategic level. It has been noted that Transport NSW is currently developing new targets and ambitions for public transport which will most likely address capacity issues of the York Street city bus interchange, which impacts on the passenger capacity along Willoughby Road. The State Government is also undertaking consultation with residents on the lower North Shore on future public school planning.

Through analysis, consultation and refinement we have prepared a preferred option that we believe balances opportunities and constraints to achieve an appropriate quantum of development where impacts are mitigated and the quality of the built form and public spaces will benefit the proposed and existing residents.

6.1 SEPP 65 Compliance - Principles

Principle 05: Resource, Energy and water efficiency

Good design makes efficient use of natural resources, energy and water throughout its full life cycle, including construction.

Sustainability is integral to the design process. Aspects include demolition of existing structures, recycling of materials, selection of appropriate and sustainable materials, adaptability and reuse of buildings, layouts and built form, passive solar design principles, efficient appliances and mechanical services, soil zones for vegetation & water reuse

The concept plan addresses sustainability by ensuring that future development is able to achieve excellence without restricting the form and processes adopted during the detailed design application stages. The following initiatives and allowances have been incorporated;

- Building footprints orientated to make best use of passive design principles such as the penetration of winter sunlight and exclusion of summer sun,
- Building footprints of a depth that ensures cross ventilation so as to not rely on air-conditioning and mechanical ventilation systems,
- Stormwater ground penetration through the use of water sensitive swales contained within new roads and public open space, together with an overall reduction across the site of hard landscaping,
- Significant areas of deep soil planting contributing to stormwater ground penetration and the provision of flora corridors,
- The achievement of BASIX as a minimum standard to all future residential apartment buildings, &
- Reuse of collected grey water from the site for use on landscaping within the Public Park and communal open spaces.

In addition, the project makes a significant contribution to the delivery of a more sustainable built environment by contributing a significant number of new dwellings with a context that has excellent existing infrastructure and services. This injection of new residents makes better use of existing public transport systems, public open space, surrounding retail and commercial centres while contributing a mix of dwelling types within a context that is significantly dominated by single standalone residential houses.

Principle 06: Landscape

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both occupants and the adjoining public domain.

Landscape design builds on existing site's nature and cultural features. It enhances the natural performance of the development by co-ordinating water and soil management, solar access, micro climate, tree canopy and habitat values. it contributes positively to the streetscape and contextual character

This project proposes two significant new public open spaces, the first at the corner of Artarmon Road and Richmond Avenue, and second within the site and accessed via a shared surface loop. This park is composed of active and passive recreation spaces and provides opportunity for both future and existing surrounding residents to utilise. This new park will provide an additional type of public open space distinct from the surrounding regional open spaces of Artarmon Reserve and the Bicentennial Parklands. The community and Council are of the opinion that the provision of a space of this type will make a valuable contribution to the surrounding context.

In addition to this new public open space the concept plan makes allowances for new roads and pedestrian thoroughfares to ensure that the site is permeable and connected to the surrounding urban context. This includes a connection through the site to the isolated Council Reserve located to the south of the site's boundary. The roadways have been designed to incorporate street trees and stormwater swales, both of which will contribute positively to public domain.

Each development site includes the provision of setbacks and communal open spaces to accommodate landscaping buffers to soften building edges and improve relationships between built forms. These landscaped edges are continued to the edges of the site where significant setbacks allow for appropriate landscaped transitions to surrounding existing residential dwellings.

Principle 07: Amenity

Good design provides amenity through the physical, spatial and environmental quality of a development.

Optimising amenity requires appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, indoor and outdoor space , efficient layouts and service areas, outlook and ease of access for all age groups and degrees of mobility.

The concept plan makes adequate allowance to achieve dwellings of excellent amenity. The site layout plan is geometrically simple and ensures an ability to achieve straightforward apartment layouts which achieve the required levels of sunlight access and cross ventilation.

The location of building envelopes have been developed to ensure appropriate separations between buildings, in line with the guidance contained in the RFDC. Furthermore, the building envelopes are located so that the impact to surrounding residential dwellings are minimised while minimum requirements in regards to building separation and sunlight access are achieved.

All buildings have been located so as to enjoy both local and regional view opportunities. In this regard, smaller and lower buildings have been located where they can enjoy views across new parkland and road reserves, while larger buildings have been located to take advantage of the hill-top location with views toward Naremburn, Artarmon and the Sydney CBD.

Principle 08: Safety and Security

Good design optimises safety and security, both internal to the development and for the public domain.

This is achieved by maximising the overlooking and surveillance of public and communal open space without compromising internal privacy. Avoiding dark and hidden spaces and providing clear and safe access.

The proposed site layout achieves a number of important outcomes each contributing to a safe and secure precinct;

- Incorporation of appropriately scaled public roads, pedestrian networks and through site links,
- A clear and easily recognisable movement network for vehicles, pedestrians and cyclists,
- Clear definition between public and private domains, articulated by changes in level, landscape treatment and fencing,
- Two new public parks that are visually permeable across its width and accessible from 4 edges,
- Landscaping that concentrates on low ground cover and taller canopy trees so as to limit the opportunity for hiding in low lying scrub environments,
- Secure entry points to each residential lobby space,
- Basement parking areas which are secure,
- A basement parking layout which achieves visual permeability to limit the opportunity of hiding places,
- A division of the overall addresses of buildings to ensure smaller, more communal lobby spaces, &
- Lobby spaces and access corridors to dwellings which have access to direct natural light and ventilation.

6.1 SEPP 65 Compliance - Principles

Principle 09: Social Dimension and housing Affordability

Good design responds to the social context and needs of the local community in terms of lifestyles, affordability, and access to social facilities.

New developments should optimise the provision of housing to suit the social mix and needs in the current or future desired community. Developments should address housing affordability by optimising the provision of economic housing choice and a range of housing that caters for different budgets and housing needs.

The concept plan incorporates a variety of dwelling opportunities ranging from terrace housing through to apartments. While an emphasis has been on delivering predominantly apartments that are single level and easily accessible, we have incorporated a number of different types of dwellings across different scaled buildings, ranging from 2 to 12 levels. Each building envelope proposes unique dwelling layouts which are suited to their location, outlook and aspect.

The concept plan makes allowances for the provision of affordable housing across the site. It is proposed that a minimum of 4% of the dwellings are allocated for key worker housing, as per Council's policy, so as to help respond to the significant housing cost issue that Sydney and the lower North Shore are experiencing.

The mix of dwellings achieved across the site achieves 36% 1 bedroom, 44% 2 bedroom & 20% 3 bedrooms. In the preparation of the preferred option we have been careful to ensure that the building envelopes are flexible enough to accommodate future mix fluctuations. This is particularly important on a site that is able to be staged and likely to be delivered over an extended period of time.

Principle 10: Aesthetics

Quality aesthetics require the appropriate composition of building elements, textures, materials and colours and reflect the use, internal design and structure of the development. Aesthetics should respond to the environment and context, particularly to desirable elements of the existing streetscape or, in precincts undergoing transition, contribute to the desired future character of the area.

The building aesthetics will be addressed through future Development Applications and approvals. However, the concept plan achieves a number of significant outcomes which will contribute to an appropriate and excellent aesthetic outcome;

- The provision of a number of discrete building envelopes to ensure buildings of a maximum scale,
- The proposal for a number of different development parcels to encourage a variety of developers, builders and architects to contribute to the final built form outcome,
- The incorporation of deep balcony zones to encourage appropriate building articulation,
- The assumption of naturally lit and ventilated corridors and lobbies to encourage internal building activity to be externally expressed,
- Building envelopes which allow appropriate volumetric scope, encouraging the articulation of building tops through architectural detail,
- The incorporation of significant public open space and landscaped street networks which will soften building form while integrating the site into the surrounding street network.

Outlined below is the summary of the proposal's compliance with SEPP 65 Guidelines.

Attribute	SEPP 65 Guidelines	Compliance with Guidelines
Apartment Layout	• *Single aspect apartments limited in depth to 8m from a window* • *Back of a kitchen no more than 8m from a window* • *The width of cross-over/cross through apartments over 15m should be 4m to avoid deep narrow apartment layouts* • *Buildings not meeting min. standards to demonstrate how natural ventilation and daylight access can be achieved* • *Housing Affordability (3% overall) suggests the following minimum sizes:* *o 1 B/R apt 50 sqm* *o 2 B/R apt 70 sqm* *o 3 B/R apt 95 sqm*	• There are some single aspect apartments with distances to the back of the kitchen in excess of 8m (refer 1:100 plans which have been dimensioned). The majority of these are north facing and have good natural light penetration via large sized windows • Refer comments above • No deep narrow apartments created • Buildings meet minimum standards of natural ventilation and daylight access – refer to attached diagrams • Minimum apartment sizes are met
Apartment Mix	• *Provide a variety in housing types – studio, one, two, three bedroom plus, particularly in large apartment buildings*	• A variety of housing types have been provided – 36 % x1 bed, 44% x 2 bed, 20% x 3 bed apartments and townhouses. • There are 90 x 3 bedroom, 2 level + attic space terrace houses, 15 of which have a 'fonzie flat' located on top of their garage and able to be individually accessed. • Blocks B, D, E and F have the capacity to include ground floor terrace typologies with their own private street access

6.2 SEPP 65 Compliance Table

Balconies	• *Where other private open space is not provided, provide at least one private balcony – Provide balconies for all apartments with a minimum depth of 2m* • *Developments which seek to vary from the min. standards must demonstrate that negative impacts from the context-noise, wind – can not be satisfactorily mitigated with design solutions* • *Require scale plans of balcony with furniture layout to confirm adequate useable space, when an alternative balcony space is proposed*	• Ground floor units are provided with private open space to the front and rear. All apartments have balconies with a minimum depth of 2m • Have very generous sized balconies • Balcony spaces are adequate and useable
Ceiling Heights	*Residential flat buildings or other residential floors:* • *In general 2.7m minimum all habitable rooms on all floors* • *2.4m preferred minimum for all non-habitable rooms*	• Living spaces and bedrooms meet 2.7m minimum • Non habitable rooms achieve 2.4m height
Flexibility	*To provide robust building configurations, which utilise multiple entries and circulation cores especially in buildings over 15m long* • *Provide apartment layouts which accommodate the changing use of rooms* • *Utilise structural systems which support a future change in building use or configuration*	• Multiple cores are provided to apartment buildings with a maximum of 5 dwellings accessed per level from a single core • Apartment layouts can change to reverse dining and living areas and have bedrooms which can be used as studies • Structural grid and apartment layout provides for an open plate structure, which will allow for future flexibility. • Accessible ground level entry, and carpark entry, allows for accessible and visitable units
Ground Floor Apartments	• *Design front gardens which contribute to spatial and visual structure of the street by promoting ground floor entry to apartments* *Ensure adequacy and privacy of ground floor apartments located in urban areas with no street setbacks by:* • *stepping up the ground floor to the level of the footpath a maximum 1.2m* • *optimising the number of ground floor apartments with separate entries and consider requiring an appropriate percentage of accessible units. This relates to the desired streetscape and the topography of the site* • *Providing ground floor apartments with access to private open space, preferably as a terrace or garden*	• Raised front garden landscaping and deep soil zones contribute to the street character. • Changes in level between the public and private realm help to achieve excellent separation and residential privacy. • Each ground level apartment has direct street level access. • Each ground level dwelling has an external courtyard or garden • The buildings have adequate setbacks from street
Mixed Use	*Consider building depth and form in relation to each use's requirements for servicing and amenity. The compatibility of various uses can be addressed by utilising:* • *Building layout which promotes variable uses or tenancies* • *Optimal floor to ceiling heights, e.g. 3.3m – 4m for active public uses such as retail, restaurants* • *Optimal building depths such as 10 – 18m for residential or other smaller commercial uses* • *Extra care when larger uses of commercial spaces – cinemas, supermarkets, department stores are integrated with residential uses*	• A small cafe/retail space is located at the ground floor of either building F or A, accessed from the internal road network. It has excellent northerly aspect and overlooks the new public park.

6.2 SEPP 65 Compliance Table

Storage	*In addition to kitchen cupboards and bedroom wardrobes, provide accessible storage facilities at the following rates:* • *Studio apartments: 6 cubic metres* • *One bedroom apartments: 6 cubic metres* • *Two bedroom apartments: 8 cubic metres* • *Three plus bedroom apartments: 10 cubic metres* • *Locate storage conveniently for apartments where at least 50% of the required storage in an apartment accessible from either the hall or the living area* • *Where basement storage is required exclude it from FSR calculations*	• The required storage spaces for 1, 2 and 3 bedroom units has been provided with 50% of the required storage space located inside the apartment. • Supplementary storage areas have been allowed for in the basement for each of the Units. These can accommodate bicycles and provide for the supplementary 50% of storage space.
Acoustic Privacy	• *Ensure a high level of amenity by protecting privacy of residents*	• Apartments have been arranged to control noise and circulation zones have been used as a buffer.
Daylight Access	• *Living rooms and private open spaces for at least 70% of the apartments in a development should receive a minimum of two hours direct sunlight between 9am and 3pm in mid winter* • *Limit number of single aspect apartments with a southerly aspect (SW - SE) to a maximum of 10% of units proposed.* • *Developments which seek to vary from the minimum standards must demonstrate how site constraints and orientation prohibit the achievement of these standards and how energy efficiency is addressed*	• 81% of dwellings achieve the minimum two hours of direct sunlight between 9am and 3pm on 21st of June. • There are no dwellings with a single aspect to the south.
Natural Ventilation	• *Building depths which support natural ventilation typically range from 10 – 18 metres* • *60% of residential units should be naturally cross-ventilated* • *25% of kitchens within a development should have access to natural ventilation* • *Developments which seek to vary from the min. standards must demonstrate how natural ventilation can be satisfactorily achieved, particularly in relation to habitable rooms*	• 65% of dwellings will be cross vented. • The majority of kitchens are located towards the rear of the apartment within reasonable proximity of large operable glazed areas.
Facades	• *Compose facades with an appropriate scale, rhythm and proportion which respond to the buildings use and the desired contextual character*	• The preferred option building envelope provides opportunity for appropriate articulation and detail. Current building layouts suggest a variety of wall and balcony configurations to create a rhythm and texture to the overall built form

6.2 SEPP 65 Compliance Table

Roof Design	• *Provide quality roof designs which contribute to the overall design and performance* • *Integrate the design of the roof into the overall façade*	• The preferred option envelope allows scope for architectural detail to contribute to the building skyline. • Roof designs will be able to be integrated into the overall architectural concepts.
Energy Efficiency	• *Limiting the number of single aspect apartments with a southerly (SW – SE) to a maximum of 10% of total units proposed* • *Maximise thermal mass. Insulate roof/ ceiling to R2.0, external walls to R1.0, and floor, including separation from basement car parking to R1.0*	• Single aspect units with a southerly orientation is limited to 1.0% • Thermal mass will be maximised as the roof and walls between units will be adequately insulated to the minimum level as indicated in the BASIX report
Maintenance	• *For developments with communal open space, provide garden maintenance and storage area which is efficient and convenient to use and is connected to water and drainage*	• A storage space and amenity facility has been provided in the basements suitable for maintenance staff
Waste Management	• *Supply waste management plans as part of the development application submission as per the NSW waste board*	• Waste Management has been considered with each core incorporating rubbish chutes and recycling areas. • Basements have been designed to accommodate rubbish trucks
Water Conservation	• *Use AAA rated appliances to minimise water use* • *Encourage the use of rainwater tanks*	• 3-4 star fixtures will be used as highlighted in the BASIX commitments Rainwater tanks have been utilized in the basement area. • Refer to the Landscape Plan regarding the use of local indigenous trees and shrubs
Safety	• *Reinforce the street boundary to differentiate between the public and private space* • *Optimise visibility, functionality and safety of building entrances* • *Improve opportunities for casual surveillance* • *Minimise opportunities for concealment*	The preferred option complies with the safety and security principles through: • Clear definition of Apartment Block entry points • Substantial amount of dwellings with direct access to footpath • Substantial artificial lighting will illuminate pathway to security entrance and Internal courtyards which provide for secure private spaces • Configuration of basements ensure there is good visual surveillance • Apartments are configured so that good passive surveillance towards both communal and public open spaces is achieved • Good design of public open space to reduce hiding places
Building Separation	*Building separation and scale to provide visual and acoustic privacy and daylight access to indoor and outdoor spaces*	The preferred option plan envelope achieves required building separations while schematic plans indicate that buildings can be laid out to achieve appropriate zoning.