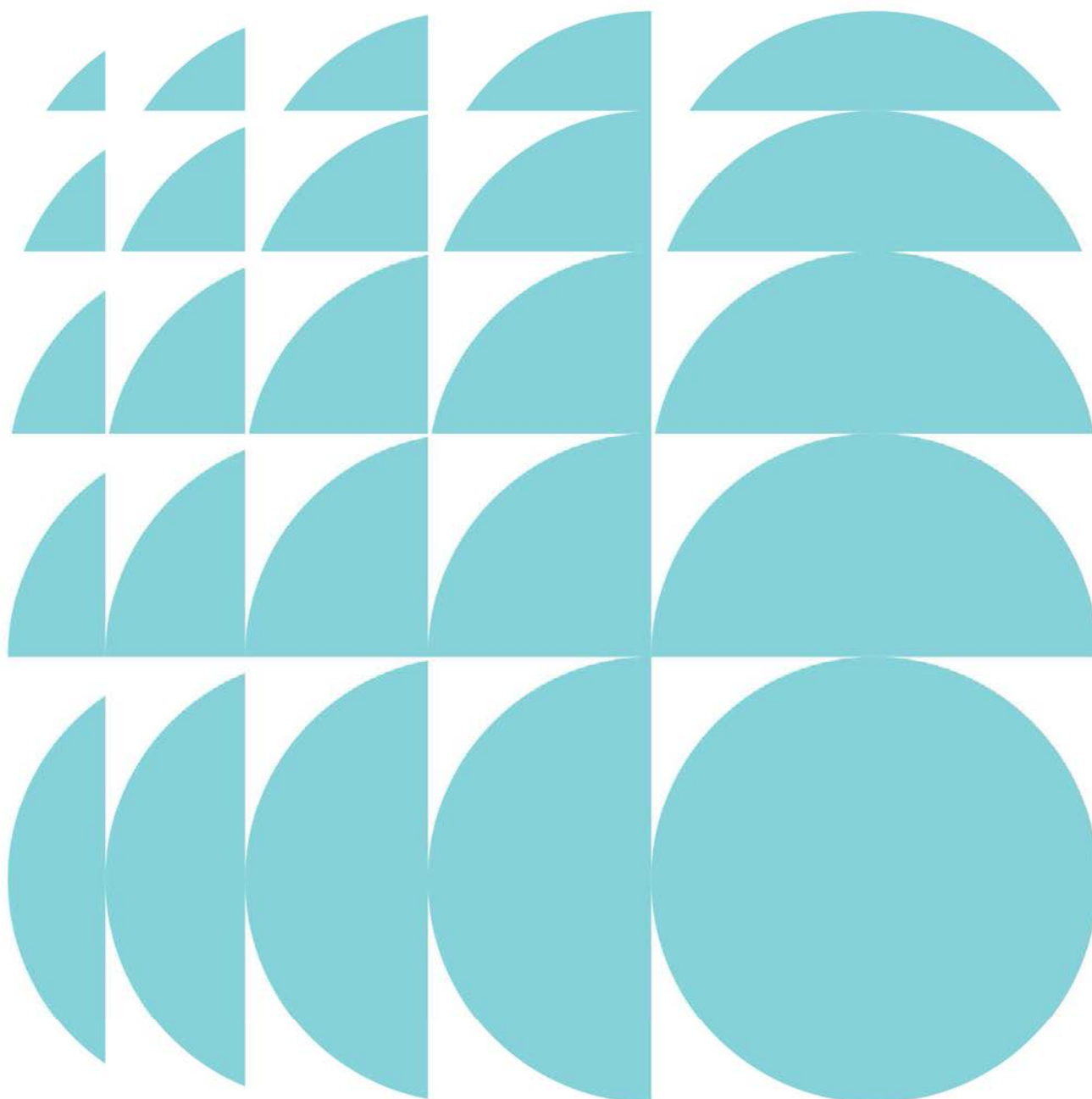


Submitted to NSW Department of Planning
and Environment

On behalf of LEPC9 Pty Ltd

30 October 2017 | 15709



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FINAL FOR EXHIBITION	30 October 2017	MO	CS

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Altus Page Kirkland

Concept Master Plan and Design Report, including Shadow Assessment, Visual Impact Assessment and ESD Statement

CHROFI and McGregor Coxall

Executive Summary

Background

The Channel 9 Campus at 6-30 Artarmon Road, Willoughby (the Site) was the subject of a Part 3A Concept Plan Approval (MP10_0198) (Concept Plan Approval) that was approved by the Planning Assessment Commission on 23 December 2014. The Concept Plan Approval provides for the residential redevelopment of the Site for up to 400 residential dwellings with small-scale non-residential uses to support the new population.

The original application and assessment involved a protracted process of options and revisions to the final development proposal in response to community and Council concerns, including through mediation before the Land and Environment Court, resulting in a design outcome in the approved master plan that is reflective of a series of compromises that did not provide optimal design or open space outcomes for the Site.

Euro Properties and Lotus Property Fund No.8 (LEPC9) agreed to purchase the Site from Nine in late-2015. With a strong understanding of the issues raised during the original assessment process, but also of the shortcomings of the approved master plan resulting from the compromising nature of this process, LEPC9 engaged five of Australia's leading architectural and urban design firms to participate in a design excellence competition to identify the best possible urban design outcome for the Site.

The outcome of the design competition conducted by LEPC9 was the unanimous selection of a new master plan proposed by CHROFI the winner of the competition. The competition jury agreed that the CHROFI scheme offered a substantial improvement to the approved scheme in terms of the design, planning, development and community outcomes delivered, and should be pursued.

A separate S75W Modification Application (Modification No.1) was previously submitted to the NSW Department of Planning and Environment (the Department) on 15 July 2016. During the public exhibition process for Modification No.1, Willoughby City Council advised that it would not provide land owner's consent for the inclusion of Scott Street within the amended master plan. This is despite Council previously providing land owner's consent to the originally proposed Concept Plan Application of 600 dwellings and maximum height limit of 18 storeys, and Council's resolution of 22 July 2013 to sell Scott Street to TCN Channel Nine Pty Ltd or a third party being the new owner or developer of the site. Accordingly, the CHROFI master plan has been revised to exclude Scott Street from the amended Concept Plan, which does not require the land owner's consent of Council.

Proposed Modifications

In summary, this Modification Application seeks to modify the Concept Plan Approval as follows:

- Replace the approved residential master plan with the revised CHROFI master plan for 495 dwellings across seven (7) residential flat buildings ranging in height from 4 to 9 storeys and two (2) buildings being partially up to 11 and 12 storeys.
- Amend the configuration and layout of public open space within the Site, resulting in a 164% increase in area, supplemented by a network of communal open space, that together improve connectivity and the potential for deep soil planting.
- Include a new public benefit offer that provides for a \$500,000 contribution towards the upgrade of the Willoughby Road/ Artarmon Road/ Small Street intersection and a \$1 million contribution toward bushland regeneration and access upgrades to Walter Street Reserve (and/or proximate public open space). However, the Proponent remains open to commencing dialogue with Council

at any point during the S75W Modification Application process in relation to the previously rejected offer under Modification 1, or other Council-endorsed alternatives.

- Provide a simpler internal road network, providing for on-street visitor parking within a new loop road and a new roundabout at the intersection of Scott Street and Artarmon Rd; and
- Allow for small-scale non-residential uses such as local retail, office, community or child-care uses to cater to demand generated predominately by the new residential population of the Site.

The revised master plan is illustrated in the following figure and described in further detail in this report and the CHROFI Master Plan Design Statement.



Revised CHROFI Master Plan (numbers indicate height in storeys)

Statutory Context

The Concept Plan for the Site was approved under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) with delegation from the (then) Minister for Planning. Part 3A of the EP&A Act was repealed in October 2011, however, transitional provisions were enacted that provide for continuity in the assessment of Part 3A projects, including for modifications under s75W, pursuant to relevant provisions of Schedule 6A of the EP&A Act.

The modification of an owner-occupier obtained Concept Plan by an incoming developer is a normal process which has substantial precedent in NSW. Master plans for major urban development projects such as Central Park (former Carlton United Breweries site), the Channel 7 Site (Epping), Putney Hill (Royal Rehabilitation Centre site) and Clemton Park (former Sunbeam factory) all evolved significantly following the purchase of these sites by residential developers. In each case, the amended master plan resulted in a significantly superior design, development, planning and community outcomes compared to the original plan based on the knowledge and insight of the incoming residential developer in delivering residential dwellings.

Recognising that complex urban development projects do change as time progresses, urban conditions change and new parties become involved, Section 75W of the EP&A Act permits a versatile approach in the modification of approvals under Part 3A that facilitates the proposed modification to the master plan for the Site.

The project, as it is proposed to be modified, continues to be for the residential redevelopment of the Site with some small-scale non-residential uses. Notwithstanding the increase in the number of dwellings and maximum height of buildings proposed, the project does not give rise to any new environmental assessment issues, results in a number of improvements to the key measures considered during the original planning assessment, and as such this modification is well within the scope of s75W of the EP&A Act. Furthermore, the modification application will be subject to a process of environmental assessment, community input and independent determination that is similar to the original Concept Plan application.

Modification No.1 to the Concept Plan Approval remains under assessment, however, the Department have advised that the assessment will not be progressed without the land owner's consent of Willoughby City Council for the inclusion of Scott Street. Accordingly, Modification No.2 seeks to exclude Scott Street from the amended master plan. The EP&A Act does not prevent the concurrent assessment of multiple modification applications, however, notwithstanding this it is the intention of the Proponent to withdraw Modification No.1, once Modification No.2 has progressed to an advanced stage of the assessment process.

This modification application relates to the Concept Plan Approval only, and further Development Applications will provide information and assessment for detailed design and construction of individual buildings, site infrastructure and public open space. The Proponent will be required to submit the Development Applications to Willoughby City Council (Council) for assessment and determination under Part 4 of the EP&A Act prior to any physical works being commenced on Site.

Strategic Context

Since the declaration of the project as a potential Part 3A Concept Plan in 2010, the strategic planning and urban development framework in Sydney has changed significantly. This includes:

- the release of *A Plan for Growing Sydney*, providing additional emphasis on the need to increase housing supply, promote urban renewal close to major centres and improve open space connectivity;

- the exhibition of the Draft North District Plan, which gives effect to metropolitan planning priorities, and seeks to improve housing affordability and the connectivity of jobs, homes, and recreation in Sydney;
- the exhibition of Council's *Housing Position Statement for Discussion* that recognises growing demand for housing, emphasises greater housing mix to address shrinking household sizes and affordability issues, and supports accommodating higher capacity within walking distance of services and amenities;
- the publication of revised population and housing projections for Willoughby by the NSW Department of Planning and Environment, which indicate that annual dwelling production within the LGA needs to be 68% higher than actual dwelling completions in Willoughby over the past decade;
- the progression of the NSW Long Term Transport Master Plan with commencement of construction on the Sydney Metro Northwest and CBD Light Rail, and planning for the delivery of the approved Sydney Metro City and Southwest, which will reduce bus traffic on the Gore Hill Freeway and within the Sydney CBD, increasing capacity for buses from other suburban areas such as Willoughby;
- significant capital allocations in the NSW State Budgets toward the development of additional public school capacity within the Lower North Shore; and
- increased development activity, market uptake and community acceptance of residential apartment living within the Lower North Shore and broader Sydney region.

As a result of these strategic shifts, there is an increased capacity for the Site to contribute to the achievement of housing targets, provide for higher quality urban density and better integration into the existing community and offer additional community benefits.

Environmental Assessment

The proposed modifications to the approved Concept Plan have been developed with the objective of ensuring that the amendments result in a reduction in impacts from the approved master plan. To this effect, the amendments would deliver a net reduction in overshadowing of surrounding properties, a reduced visual impact, a better transition to the surrounding neighbourhood, more and higher quality open space and a reduction in the approved impacts on the local traffic network. Key assessment issues are summarised below:

Built Form

The CHROFI master plan provides a skilful and sensitive response to the unique opportunities and context of the Site. The revised master plan creates a highly articulated and low-scale street edge that creates an appropriate transition to surrounding low density areas, whilst sensitively positioning taller elements deep within the centre of the Site where they have less environmental impact than the shorter, bulkier approved building envelopes. Maximum building envelopes throughout the site are heavily sculpted to ensure that suitable transitions and setbacks provide privacy, sunlight and amenity to surrounding residences and to the future occupants of the development.

The Visual Impact Assessment undertaken for this modification application demonstrates that whilst the CHROFI master plan includes a small number of taller building elements, the provision of clear view corridors and sensitive placement of these taller elements will ensure that the visual

impacts of the proposed development from surrounding areas in Willoughby, Artarmon, Northbridge and Naremburn are less than the approved Concept Plan. The composition of proposed taller buildings within the Site make a positive contribution towards the expression of the urban design, creating a 'hill topping' effect that reflects the contours of the landform and the graduated pattern of development in the immediate vicinity of the Site.

The amended master plan provides for a net reduction in overshadowing impacts in comparison to the approved Concept Plan, despite the increase in building height, through the skilful positioning of buildings and the use of more slender tower forms. These design measures ensure that all neighbouring residences on Walter Street achieve compliance with the applicable solar access provisions of the Willoughby Development Control Plan 2012, except where neighbouring dwellings cannot comply due to existing topographical conditions. In the Castle Vale residential complex to the east, all affected residential flat buildings comply with the design criteria of the Apartment Design Guide and there is a net improvement in solar access compliance.

Landscape and Public Open Space

The proposed modification will increase the area of publicly accessible open space by 164% compared to the current approval, and significantly enhance the useability, safety and connectivity of this space to create an improved public open space network. Each of the public open spaces within the amended scheme will be connected and easily accessible to the public, in comparison to the approved scheme which lacks continuity and clear demarcation of public and private spaces. The amended open space network will provide a range of high-quality active and passive recreational opportunities, including a new children's playground. The proposed open space network will provide a new connection for the existing community into the corridor of public open space along Flat Rock Creek, and an additional contribution of \$1 million toward the upgrade of Walter Street Reserve will revitalise a poor-quality and underutilised public reserve.

Traffic

The proposed modification includes a number of significant improvements to the approved Concept Plan traffic arrangements, including:

- Voluntary \$500,000 contribution toward the future upgrade mooted in Council plans for the intersection of Willoughby Road, Artarmon Road and Small Street;
- Rationalising the internal road network, creating a new loop road that is legible and consistent with the local street pattern, is public in character and provides parking for visitors to the Site; and
- Simplifying site ingress/egress points, including halving the number of driveways to Artarmon Road, and including a new roundabout at the intersection of Artarmon Road and Scott Street, to create safer conditions for local traffic.

At the Willoughby Road intersection, the proposed modification would result in the following changes from the current approval without any network upgrades:

- No change to Level of Service (B) during weekday AM peak;
- Decrease from Level of Service B to Level of Service C (Satisfactory) during the weekday PM peak; and
- No change to Level of Service (C) during Saturday peak.

Given that the overall intersection will continue to operate at a minimum of Level of Service C (Satisfactory) during the busiest peak period, it is considered that the proposed modification will result in an acceptable traffic outcome.

Other Matters

This planning report includes a detailed assessment of all relevant planning matters for consideration as part of the Concept Plan modification, and includes appropriate amendments to conditions to ensure that environmental issues associated with future development in accordance with the Concept Plan is appropriately managed.

Conclusion

In comparison to the approved Concept Plan, the amended CHROFI master plan represents an improvement in all key planning and design measures. The amended master plan would deliver a substantially larger and better connected open space, improved traffic conditions, reduced visual impact and overshadowing and a higher quality urban design outcome in comparison to the current Concept Plan Approval. The modification seeks to increase the number of dwellings and the height of a small number of buildings in comparison to the existing approval. These increases are a necessary component of the revised master plan, which includes significant additional public benefits compared to the approved plan, and the technical assessment of the CHROFI master plan demonstrates that these benefits outweigh the perceived impacts of this additional density for the local community and the State. On merit, the proposed CHROFI master plan offers a significant improvement in comparison to the current approval and should therefore be supported.

1.0 Introduction

This Modification Application is submitted to the NSW Department of Planning and Environment (the Department) in relation to the Part 3A Concept Plan (MP10_0198) Approval (Concept Plan Approval) for 6-30 Artarmon Road, Willoughby in accordance with Section 75W and Clause 3C of Schedule 6 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The Site was purchased by LEPC9 Pty Ltd (the Proponent), a joint venture of Euro Properties and Lotus Property Fund, from Nine Network Australia (Nine) in August 2015. Since this time, the Proponent has undertaken an architectural and urban design competition to identify the highest quality residential development outcome for the Site, and is consequently seeking to modify the Concept Plan Approval.

In brief, this application seeks to amend the Concept Plan Approval by replacing the currently approved master plan with a new master plan prepared by the winner of the Proponent's architectural and urban design competition, CHROFI. Key changes resulting from the new master plan, which are further described at **Section 5.0**, comprise:

- Revised master plan identifying new building envelopes, public and communal open space;
- Revised internal road layout, revised Site access arrangements;
- Exclusion of Scott Street from the Concept Plan approval; and
- New public benefit offer, including a contribution toward the upgrade of the Willoughby Road/ Artarmon Road/ Small Street intersection and bushland regeneration and access upgrades to the Walter Street Reserve.

This report has been prepared by Ethos Urban on behalf of the Proponent. The report describes the proposed modifications; outlines the purpose of the modifications; and provides a detailed assessment of the potential environmental impacts. This report should be read in conjunction with the Urban Design Report prepared by CHROFI (under separate cover) and the other appended documentation.

1.1 Project Team

The Proponent has assembled an expert consultant and design team to deliver the master plan for the project, as outlined below.

Specialisation	Consultant
Development Management	Platform Project Services
Executive Architect	Andrew Andersons AO
Urban Design and Architecture	CHROFI
Urban Planning	Ethos Urban
Communications and Stakeholder Engagement	Ethos Urban
Landscape Architecture	McGregor Coxall
Traffic and Transport Engineering	McLaren Traffic Engineering

Specialisation	Consultant
Heritage	Godden Mackay Logan
EMF	Kordia Solutions
Arborist	Redgum Horticultural
Wind Assessment	Windtech

2.0 The Site

2.1 Site Location and Context

The Site is located at 6-30 Artarmon Road, Willoughby, within the Willoughby Local Government Area (LGA). The Site is occupied by the existing television production facilities and offices for Channel 9. It has an area of 29,724m² and is shown in **Figure 1**.

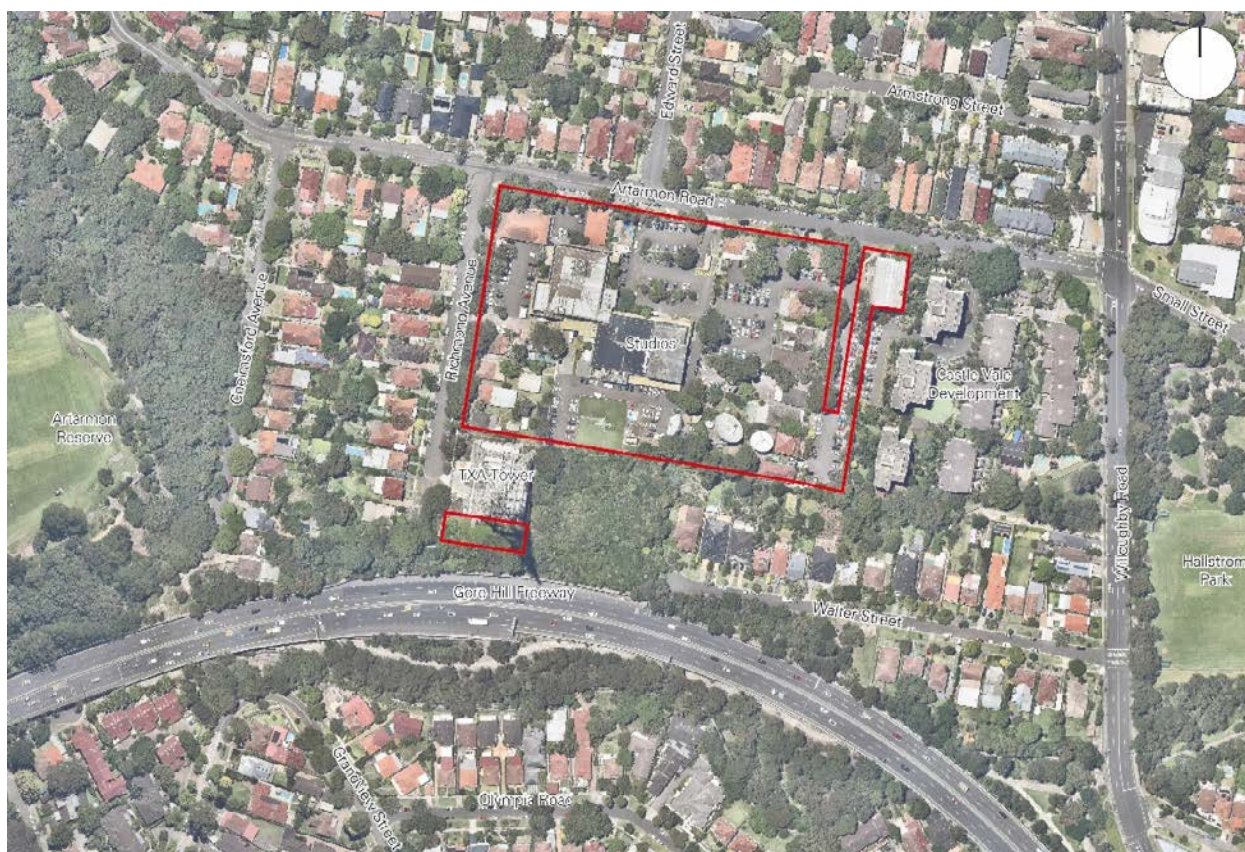


Figure 1 - Aerial image of the Site (shown in red)

Land Ownership and Legal Description

The Site is comprised of a number of lots which are legally described as:

- Lot 1 DP 820327;
- Lot 1 DP 327266;
- Lot 10 DP1162507 (formerly part Lot 1 DP 748215);
- Lot 12 DP 1162507 (formerly part Lot 1 DP 748215); and
- Lot 13 DP 6849.

Land owner's consent from Nine, who are the current owner of the lots identified above and who have a development agreement with the Proponent, is provided under separate cover.

This Modification Application seeks to exclude the Scott Street public road reserve from the land to which the Concept Plan applies.

3.0 Background to Modification Application

3.1 Concept Plan Approval

The redevelopment of the Site was declared to be a project to which Part 3A of EP&A Act applies on 19 November 2010. Nine submitted an Environmental Assessment Report in November 2012, which was publicly exhibited and assessed during 2013.

Nine's original Concept Plan application was exhibited between February and April 2013 and provided for:

- 600 apartments and townhouses;
- Building heights up to 18 storeys;
- 59,117m² of gross floor area (2.04:1 FSR); and
- 3,250m² of public open space.

Over the course of the assessment process, Nine put forward a number of alternate options for the redevelopment of the Site, and the design and development parameters were revised a number of times in response to the Department's assessment and issues raised by Council and community stakeholders. A revised proposal was submitted in October 2013 which provided for:

- 450 apartments and townhouses;
- Building heights up to 14 storeys;
- 47,840m² of gross floor area (1.6:1 FSR); and
- 4,410m² of public open space.

The Department of Planning and Environment undertook its final assessment of this scheme, and produced its Assessment Report in January 2014. The Department's assessment recommended that the project be approved, subject to a reduction in the maximum building height of the tallest building to 12 storeys but retaining 450 dwellings. The Department's assessment had the benefit of independent traffic advice provided by Arup.

In determining the Concept Plan application, the NSW Planning Assessment Commission (PAC) had regard to an alternate set of development parameters put forward by Council that essentially comprised a pared-back version of Nine's proposal, with building envelopes deleted or lowered to a maximum of eight storeys.

On 5 March 2014, the PAC granted conditional approval for Nine's Concept Plan Application subject to:

- A cap of 350 dwellings;
- Maximum building height of eight storeys; and
- 39,550m² of gross floor area (1.29 FSR).

Nine appealed the PAC's determination to the NSW Land and Environment Court under s75Q(2) of the EP&A Act. Prior to a hearing, mediation between the PAC, Council and Nine resulted in an

agreement between the parties to allow an increase in the approved number of dwellings and a range of additional amendments to the approved plans. The outcomes of the mediated agreement were formalised by the Land and Environment Court on 22 December 2014 in its decision to uphold appeal proceedings No. 10362 of 2014. This approval enables:

The use of the site for a residential development with small-scale non-residential uses, incorporating:

- *building envelopes for five residential flat buildings above basement level parking and two rows of terrace houses incorporating;*
 - *up to 400 dwellings and*
 - *up to 500m² floor space of non-residential uses to support the development;*
- *retention and adaptive reuse of No 6 Artarmon Road for retail/commercial purposes;*
- *new internal roadways and other infrastructure works to support the development;*
- *publicly accessible open space and through Site link;*
- *temporary exhibition homes and/or exhibition villages; and*
- *superlot subdivision.*

Under the terms of the Concept Plan Approval, the gross floor area is limited to 37,136m² (1.2:1). A total of 3,178m² of open space is required to be publicly accessible.

A copy of the final Instrument of Approval and Approved Plans are provided at **Appendix A**, with **Figure 2** below illustrating the approved building envelopes. **Figure 3** presents a graphical representation of the series of amendments made to the approved Concept Plan throughout the original planning assessment process.

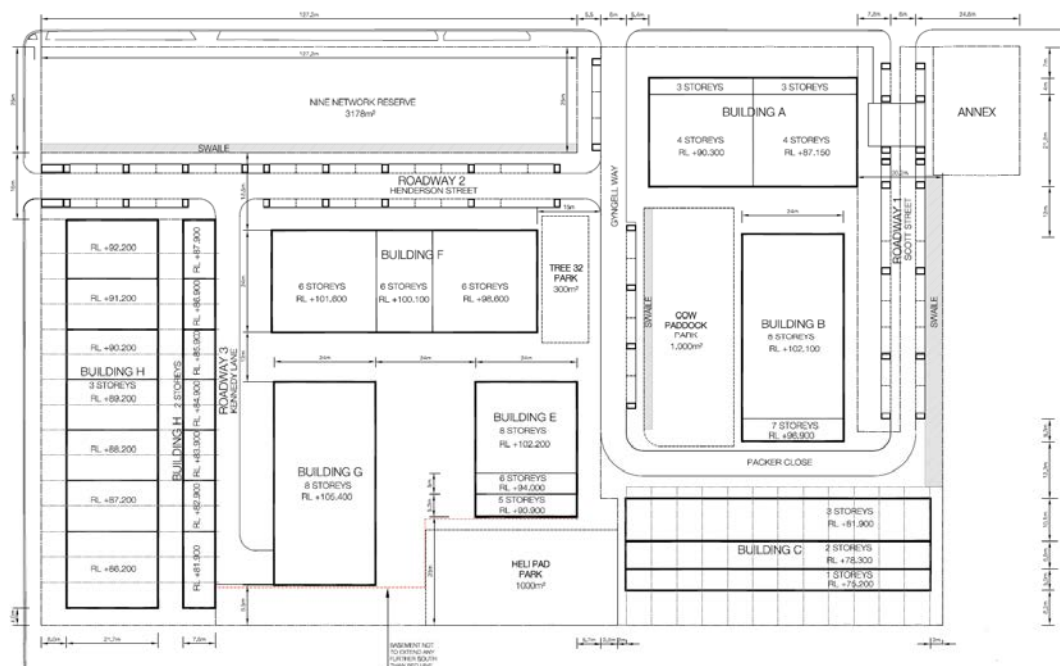


Figure 2 - Approved location and extent of building envelopes on the Site:

Source: Concept Plan Approval MP10_0198

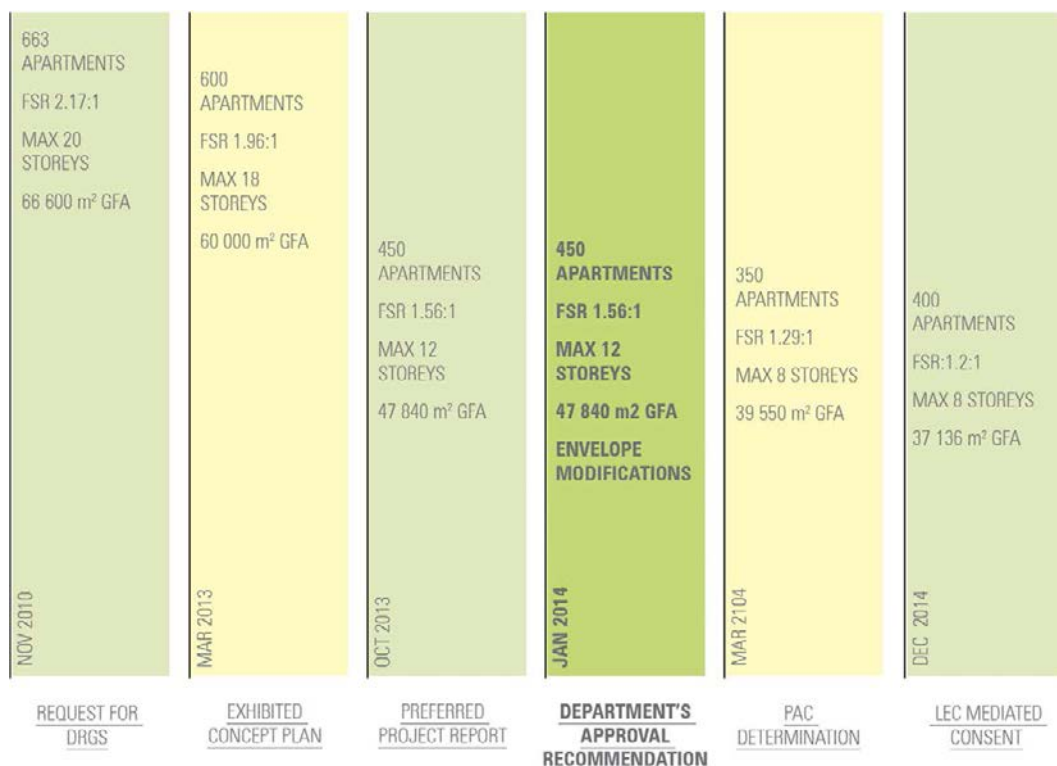


Figure 3 - Diagrammatic progression of the original Concept Plan assessment

Source: Ethos Urban and CHROFI

3.2 Sale of Site

Nine entered into an agreement to sell the Site to LEPC9 Pty Ltd in August 2015. Under the contract of sale, Nine will occupy the Site until 2020 (or earlier at Nine's election) on a sale and lease-back arrangement with LEPC9 until Nine transitions to other premises.

LEPC9 is a partnership between Australian property fund Lotus Property Fund No.8 and Hong Kong-based fund managers Euro Properties, who have delivered residential projects in Australia, North America, Hong Kong, Singapore and China.

3.3 Design Review and Competition

Upon purchasing the Site from Nine, LEPC9 engaged pre-eminent Sydney architect Andrew Andersons AO to review the approved master plan and make recommendations regarding the further development and delivery of the site from an urban design and architectural perspective. Mr Anderson's finding was that the approved master plan outcome reflected the long process of hard fought compromises and reactions during the original assessment process, resulting in sub-optimal outcomes for both the existing local community and the future residents of the Site. It was deemed that an improved outcome could be achieved on such a rare and important landholding in relatively close proximity to the Sydney CBD and local amenity.

Whilst Council does not have a formal policy or requirement for design excellence or architectural design competitions, Mr Andersons and LEPC9 determined that it would be appropriate to establish an architectural design competition to identify the best possible urban design solution for the Site. Proponent-instigated design competitions have been conducted for a number of urban redevelopment projects *after* the initial master plan approval, including for Frasers Broadway

(former Carlton United Breweries site) and Putney Hill (Royal Rehabilitation Centre Sydney), leading to superior urban design outcomes when compared to the original approvals.

A design competition was convened in late-2015 with five award-winning architectural firms – CHROFI, FJMT, SUB, BVN and Cox Richardson – engaged by LEPC9 to participate in the competition. The design competition was generally conducted in accordance with the NSW Department of Planning and Environment's *Director General's Design Excellence Guidelines*, and sought to achieve the best development outcome for the Site on a range of urban design, amenity and development criteria. All competitors were fully briefed on the Site's context and the issues and challenges identified during the exhibition and assessment of the original Concept Plan, and were provided with copies of documents including:

- Council's submissions on the original Concept Plan;
- Department of Planning and Environment's planning assessment report for the original Concept Plan;
- PAC Determination Report for the original and LEC mediated Concept Plan;
- Copies of all public and stakeholder submissions in response to the original Concept Plan; and
- All specialist studies prepared for the assessment of the original Concept Plan and modified versions.

The design competition produced a range of high quality potential outcomes for the Site, with the CHROFI scheme being selected by an appointed jury of design, planning and property experts (chaired by Andrew Andersons AO) as the scheme that delivered the best urban design and development outcome for the Site. A copy of Mr Anderson's qualifications, a summary of the alternative schemes presented by each of the other competitors and a summary of the jury assessment is provided at **Appendix C**.

Following CHROFI's selection as the winner of the competition, the master plan was developed further to reflect further design development and feedback from key community and planning stakeholders and the comments received in relation to Modification No. 1. This modification application, being Modification No. 2, represents extensive design development to secure the best possible outcome for the Site and community.

3.4 Concept Plan Modification No. 1

The NSW Department of Planning and Environment (the Department) issued Secretary's Environmental Assessment Requirements for a Section 75W Modification Application to the Concept Plan Approval on 16 June 2016.

Modification No.1 was submitted to the Department on 15 July 2016, and was publicly exhibited for a period of one month between 5 August and 5 September 2016. This modification sought to modify the Concept Plan Approval as follows:

- Replace the approved residential master plan with the revised CHROFI master plan for 510 dwellings across eight residential flat buildings ranging in height from 4 to 9 storeys, two buildings being up to 11 and 12 storeys and small-scale local commercial uses such as cafes;
- Amend the configuration and layout of public open space within the Site, resulting in an increase in area, improved connectivity and additional potential for deep soil planting;

- Include a new public benefit offer providing \$3 million towards the upgrade of the Willoughby Road/ Artarmon Road/ Small Street intersection and \$1 million contribution toward bushland regeneration and access upgrades to Walter Street Reserve;
- Provide a simpler internal road network, providing for on-street visitor parking within a new loop road and a new roundabout access point to Artarmon Rd; and
- Allow for small-scale non-residential uses such as local retail, office, community or child-care uses to cater to demand generated predominately by the new residential population of the Site.

The master plan proposed as part of Modification No.1 is illustrated at **Figure 4** below.



Figure 4 - Amended Master Plan Proposed as part of Modification No. 1

Source: CHROFI

Outcomes of the public exhibition process for Modification No.1 are discussed in further detail at **Section 4.1.2** of this report.

Modification No.1 has not yet been determined. Willoughby City Council have indicated that they will not provide land owner's consent to the application, notwithstanding Council's previous undertakings to close Scott Street and sell the land to Nine Network. Accordingly, the Department

has advised the Proponent that Modification No.1 is unable to be determined until a time when this issue has been resolved.

Due to Council's position regarding land owner's consent, and in order to continue to progress amendments to the Concept Plan, the Proponent and CHROFI have reviewed the amended master plan in order to remove Scott Street from the Concept Plan. Scott Street would instead remain a public road which is connected to the proposed internal road network within the site. The Proponent and CHROFI have also taken this opportunity to make further amendments which respond to key issues raised during the previous public exhibition process for Modification No.1. The proposed amendments to the Concept Plan Approval are described in **Section 5.0** of this report.

The EP&A Act permits multiple modification applications to be submitted and assessed concurrently. The Proponent advises that, whilst they are under no obligation to do so, they intend to withdraw Modification No.1 once Modification No.2 has proceeded to the Department's final assessment phase. As such, there is no conflict between Modification No.1 and the Department's assessment of Modification No.2.

3.5 Concept Plan Modification No. 2 (this application)

This Modification Application was initially submitted to the NSW Department of Planning and Environment on 7 April 2017. Land and Environment Court proceedings (Proceedings No. 17/157679) were commenced by the Proponent on 25 May 2017 following advice from the NSW Department of Planning and Environment that land owner's consent would be required from Willoughby City Council to exclude Scott Street from the land to which the Concept Plan application applies. The Land and Environment Court heard the case in August 2017 and issued orders on 17 August 2017 to the effect that *"the Court declares that the s 75W modification application (MP10_0198 MOD 2) dated April 2017 does not require the landowner's consent of Willoughby City Council in order to be determined"*. The Proponent has updated the Modification Application reflect changes in the strategic context and local development activity, as well as further stakeholder engagement activities, which have occurred since the application was initially lodged in April 2017.

3.6 Concept Plan Modification No.3

Further to the outcomes of the Land and Environment Court proceedings described in Section 3.5 above, the Proponent submitted a separate Modification Application No.3 to the NSW Department of Planning and Environment on 12 September 2017 to exclude Scott Street from the land to which the Concept Plan applies. This modification is independent of Modification No.2 and would not prejudice the assessment or determination of the current application.

4.0 Community and Stakeholder Consultation

4.1 Previous Consultation

The redevelopment of the Channel 9 Campus has been the subject of extensive consultation. This consultation has informed and assisted in developing the approved and modified schemes for the Site, including this latest modification application (Modification No. 2). A discussion of all consultation completed to date is provided in the following sections as context to the ongoing design development process, with particular attention paid to Modification No. 1 that has informed the most recent amendments under this application.

4.1.1 Concept Plan

The Environmental Assessment Report for the Concept Plan Approval was publicly exhibited by the NSW Department of Planning and Infrastructure online and at three physical locations for an extended period of two months between 3 April 2013 and 17 May 2013. During this period a total of 296 public submissions and one petition were made regarding the project by the general public and nine submissions by public agencies. A further 136 public submissions and three public agency submissions were provided to the Department following the submission of a Preferred Project Report (amended proposal) by Nine in October 2013.

Figure 5 and **Table 1** below provide a summary of the most prominent issues raised during the exhibition of the original Concept Plan application. A more detailed analysis of these submissions is contained in Sections 3.0 and 4.0 of the Response to Submissions and Preferred Project Report prepared by Ethos Urban (formerly JBA) and dated October 2013).

The extensive documented feedback from the community arising from the original Concept Plan application has informed the approach of LEPC9 and the project team to the revised master plan. Extensive information was provided to each of the competitors in the architectural design competition, and the CHROFI scheme was selected as the winner in large part due to its well-considered response to the key site-specific issues raised by the community and agencies during the previous assessment process.

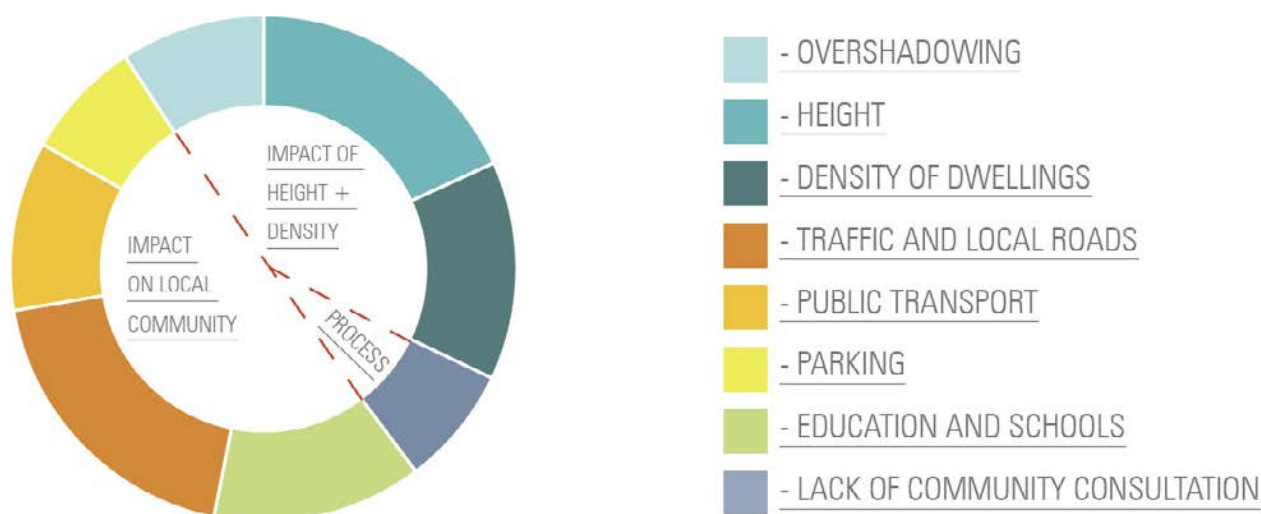


Figure 5 - Simplified summary of community issues during original Concept Plan exhibition

Source: CHROFI

Table 1- Summary of issues raised in public submissions for original Concept Plan application

Issue Category	Number of Submissions Issue Raised In	Percentage of Total Submissions Raising Issue
Traffic and Local Roads	215	73%
Height	202	69%
Density of Dwellings	158	53%
Education and Schools	150	51%
Public Transport	120	41%
Overshadowing	103	35%
Community Consultation	86	29%
Parking	86	29%
Process Related	75	25%
Non-Residential Land Uses	73	25%
Electromagnetic Radiation	64	22%
Infrastructure Capacity	53	18%
Master plan for Surrounding Area	45	15%
TXA Tower	13	4%

A full description of each issue category is provided in the 2013 Preferred Project Report available on the Department's website.

4.1.2 Modification No. 1

Modification No. 1 was lodged with the Department in July 2016 and was placed on public exhibition in August 2016. Whilst this application has not been determined, the matters raised during the consultation process for Modification No. 1 have informed the approach to this application, being Modification No. 2, and as such have been discussed below for context.

Pre-Submission Consultation

Prior to the submission of Modification 1, LEPC9 also undertook a number of activities to engage with key stakeholders within the community and relevant government agencies as required under the project SEARs:

- Meetings with planning officers at the NSW Department of Planning and Environment and Willoughby City Council.
- Targeted stakeholder meetings with key local community organisations:
 - Willoughby Area Action Group
 - Willoughby South Progress Association
 - Artarmon Progress Association.

- Letterbox drop to 2,600 households within the Site's surrounds and a newspaper advertisement placed in the North Shore Times newspaper informing residents of the information sessions and website described below.
- Two public information evenings held in Willoughby in May 2016 to provide opportunities for members of the local community to discuss the proposed modifications with members of the project team during the master planning process.
- Establishment of a project website – www.parksidewilloughby.com – to disseminate information regarding the proposal and provide an additional avenue for community feedback into the master planning process.
- Establishment of an 1800 project phone line and dedicated email address to receive and respond to community queries regarding the project.

A full description of the stakeholder engagement process is provided in the Stakeholder and Community Engagement Summary Report (**Appendix D**). In addition to the proponent's stakeholder and community engagement process, key government stakeholders were provided with the opportunity to review and provide input into the SEARs for the project by the Department. This resulted in Council, Transport for NSW, Roads and Maritime Services, Office of Environment and Heritage, Sydney Water and the Heritage Council of NSW all providing formal feedback to the Department. The key community and stakeholder feedback received during the May 2016 program of engagement can be summarised as follows:

- High level of support for the design amendments to the master plan, including the revised layout of the internal road and building footprints, including key view corridors;
- High level of support for the revised public open space layout and increase in the overall area and connectivity of these spaces;
- High level of support for the expression of the urban design and architectural intent, including for the design excellence process;
- Support for the proposed café offerings and children's playground on the Site;
- General support for the proposed built form treatment to street interfaces along Artarmon Road and Richmond Avenue;
- Desire for further information regarding the impact of the revised master plan on overshadowing of properties in Walter Street and Castle Vale;
- Desire for further information regarding potential connections through Walter Street Reserve for cyclists and pedestrians;
- Desire for further information regarding the projected traffic generation from the amended development, and impact on key local roads, intersections and site access points;
- Moderate to strong support for the upgrades to the Willoughby Road intersection.
- Moderate to strong opposition to the building elements above eight storeys in height;
- Strong opposition to the then proposed increase to 510 dwellings;
- Strong concern about incoming population and ability for services and schools to accommodate that population; and
- Strong concern regarding potential traffic impacts from additional dwellings.

Following the public community consultation, and prior to submission of this modification application to the Department, the Proponent and the project team met with Council and representatives of the Willoughby Area Action Group, Willoughby South Progress Association, Artarmon Progress Association and Naremburn Progress Association. The purpose of these meetings was to inform these stakeholders of the key findings of the further technical assessments and the amendments to the master plan resulting from the initial stakeholder engagement phase.

Public Exhibition

Following the lodgement of the application with the Department, Modification No.1 was publicly exhibited for a period of one month between 5 August 2016 and 5 September 2016. During this period the application received 231 public submissions, six 'progress association' submissions and five local and state government agency submissions. This represents a 27% reduction in the number of objections between the exhibition of the Concept Plan and Modification No. 1. The key issues raised in these submissions that required further response or clarification included:

- Built form, including height, building envelopes, transitional areas and overshadowing;
- Open space including internal pedestrian connections and tree retention;
- Traffic and transport, including impacts on local road networks, internal vehicular circulation and parking provision; and
- Development contributions and public benefit.

The following sections provide a breakdown and further details on the content and context of those submissions received during the exhibition period.

Public Submissions

In total, 231 public submissions were received in relation to Modification No.1, comprising of 207 objections. No petitions were received. In comparison, the original Concept Plan Application attracted 296 submissions objecting to the application and a petition signed by 2,910 persons. This represents a 27% reduction in the number of objections between the exhibition of the Concept Plan and the Section 75W Modification as illustrated in **Figure 6**.

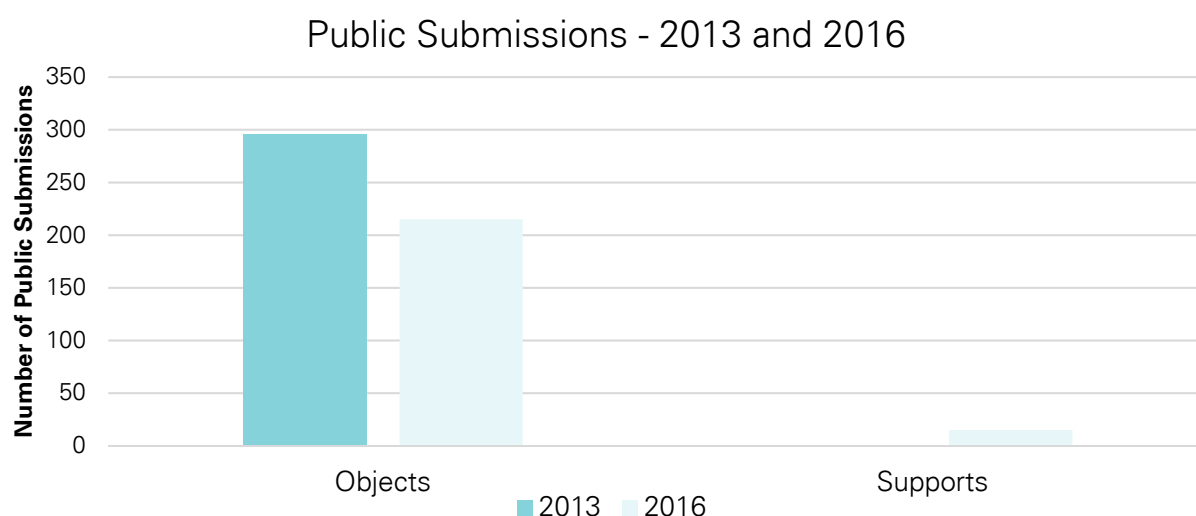


Figure 6 - Comparison of submissions from Concept Plan Application and Modification No. 1

Source: Ethos Urban

The contents of submissions received in relation to Modification No.1 primarily focused on the same issues raised during the original assessment of the Concept Plan Application, relating to local road and transport infrastructure and the scale of development proposed. The content of the submissions received are summarised in **Table 2** below.

Table 2- Summary of public submissions on Modification No. 1 by issue raised

Issue Tag	Issue Description	Object	Support/ Comment
Roads and Traffic	Comments regarding the impact of the project on traffic generation, site access points and local intersections.	153	5
Planning Process	Objections to the modification of the previously approved Concept Plan.	137	0
Public Transport	Comments relating to potential impacts on local bus capacity and proximity of the site to Artarmon Station.	100	0
Density / No. of Dwellings	Comments relating to the number of dwellings proposed under the modified master plan.	95	1
Height of Buildings	Comments relating to the height of buildings, generally in relation to buildings proposed to be greater than 8 storeys in height.	77	0
Consultation	Predominately requesting that the Planning Assessment Commission undertake a public meeting prior to determining the modification application.	72	0
Cumulative Development Impacts	Comments regarding the potential cumulative impacts of construction and occupation of the Channel 9 site and other constructed, approved or proposed residential developments in the Willoughby locality.	63	0
Education/Schools	Comments relating to the impact of the development on demand and capacity within local schools.	62	0
Open Space	Comments relating to the open space to be provided within the site and comments relating to the proposed upgrades to the Walter Street Reserve.	42	7
Overshadowing	Comments in relation to potential overshadowing, predominately in relation to Walter Street properties but also to Castle Vale apartments.	35	0
Parking	Comments relating to the proposed parking provisions, including resident parking, visitor parking	27	0

Issue Tag	Issue Description	Object	Support/ Comment
	and on-street parking within the site, as well as comments regarding impact on on-street parking in neighbouring streets.		
Infrastructure Capacity	General comments regarding the capacity of local infrastructure (including social infrastructure) to accommodate increased development on the site.	26	0
Street Presentation	Comments regarding the presentation of the site to Artarmon Road and Richmond Avenue.	19	0
Non-Residential Uses	Comments regarding the non-residential aspects of the master plan, including potential for cafes, local convenience retail and child care.	11	1
Visual Privacy	Comments regarding the impacts of new development on the visual privacy of surrounding dwellings.	8	0
General and Miscellaneous	Covering a wide range of comments not captured by the issue categories outlined above, including broad, unspecific objections to the development, commentary regarding the suitability of the site for development, comments regarding the development process, comments regarding the population estimates.	91	13

Submissions in relation to Modification No.1 were primarily received by members of the Willoughby community, and to a lesser extent members of the Artarmon and Naremburn communities, which together accounted for approximately 1.5% of the total local population, made up of 15,000¹ residents within a 1km radius of the Site. **Table 3** and **Figure 7** below demonstrates this breakdown.

Table 3- Breakdown of submissions on Modification No.1 by suburb, and level of representation per suburb

Suburb	Number of submissions	Population (2011)	% of suburb population
Artarmon	42	8,641	0.04%
Castle Cove	1	2,522	0.07%
Castlecrag	2	2,958	0.02%
Chatswood	5	21,195	0.46%
Naremburn	25	5,477	0.03%

Suburb	Number of submissions	Population (2011)	% of suburb population
North Willoughby	1	3,895	0.02%
Northbridge	1	5,931	0.05%
Willoughby	147	5,921	2.48%
Willoughby East	1	1,820	0.04%
Other	4		
Address withheld	2		
Total	231 submissions		

¹ Australian Bureau of Statistics, 2011 Census of Population and Housing, Mesh Block Counts

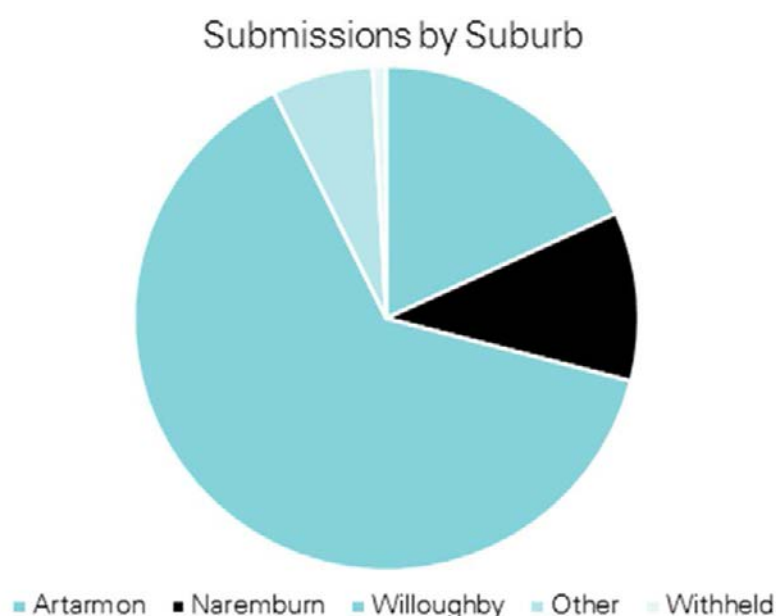


Figure 7 - Breakdown of submissions by suburb on Modification No. 1

Source: Ethos Urban

Community Organisations

Submissions were received from six (6) community organisations, comprising:

- Willoughby South Progress Association;
- Artarmon Progress Association;
- Willoughby Environment Protection Association;
- Naremburn Progress Association;
- Willoughby Area Action Group; and
- Federation of Willoughby Progress Associations.

These submissions raised issues which were generally consistent with the issues identified in the public submissions summarised above.

Public Agencies

Submissions were received from seven (7) public agencies during the exhibition period, including:

- Willoughby City Council;
- Transport for NSW;
- Roads and Maritime Services;
- Sydney Water;
- Environment Protection Agency;
- NSW Heritage Division; and
- Office of Environment and Heritage.

4.1.3 Response to Submissions

The Proponent has reviewed all public, stakeholder and public agency submissions received during the public exhibition period for Modification No.1. As many of the issues raised in these submissions are considered to be relevant to Modification No.2, a more detailed response has been provided at **Appendix E**. A full environmental assessment of the proposed modifications to the Concept Plan Approval is provided at **Section 6.0** of this report.

5.0 Description of Proposed Modification Application

The Proponent is seeking approval under Section 75W of Part 3A of the EP&A Act to modify the Concept Plan Approval (MP10_0198). The scope of the modification application is addressed in detail in the following sub-sections. In summary, the proposed modification essentially seeks to:

- Replace the approved residential master plan with the revised CHROFI master plan for 495 dwellings across seven (7) residential flat buildings ranging in height from 4 to 9 storeys, two (2) buildings being up to 11 and 12 storeys.
- Amend the configuration and layout of public open space within the Site, resulting in a 164% increase in area, supplemented by a network of communal open space, that together improve connectivity and the potential for deep soil planting.
- Include a new public benefit offer that offers to contribute \$500,000 towards the upgrade of the Willoughby Road/ Artarmon Road/ Small Street intersection and \$1 million toward bushland regeneration and access upgrades to Walter Street Reserve (and/or proximate public open space). However, the Proponent remains open to commencing dialogue with Council at any point during the S75W Modification Application process in relation to the previously rejected offer under Modification 1, or other Council-endorsed alternatives.
- Provide a simpler internal road network, providing for on-street visitor parking within a new loop road and a new roundabout at the intersection of Scott Street and Artarmon Rd.
- Allow for small-scale non-residential uses such as local retail, office, community or child-care uses to cater to demand generated predominately by the new residential population of the Site.

The CHROFI master plan is detailed in full in their Urban Design and Master Plan report, which accompanies this submission under separate cover. Key Concept Plan parameters which are proposed to be modified are described in the following chapter. An extract of the master plan is provided in **Figure 11**, and a summary of key changes to the development parameters is provided in **Table 4** below. Illustrative photomontages are located at **Figures 8** and **9**.

The proposed changes will necessitate a number of modifications to the current terms in the Instrument of Approval. The changes necessitated by the proposed modification are set out in **Appendix E**.

Table 4- Summary of key changes

Measure	Approved	Proposed	Change
Apartments	400	495	+95
Floor Space Ratio	1.2:1	1.5:1	+0.3:1
Non-Residential GFA	500m ² + The Loft Building	c.300m ² + The Loft Building	-c.200m ² Decreased by 15%
Building Volume (above existing ground)	181,727m ³	162,495m ³	-19,232m ³ Reduced by 11%
Maximum building height	8 storeys (RL 105.4 plus plant)	12 storeys (RL 116.4 to plant)	Three buildings above current approval at 9, 11 and 12 storeys
Public Open Space	3,178m ²	8,396m ²	+5,218m ² (164% increase)
Vehicular access points	2 x Artarmon Road 1 x Richmond Ave	1 x Artarmon Road 1 x Richmond Ave	1 less driveway to Artarmon Road
Parking rates	1 & 2 Bed – 1 space 3 Bed – 1.25 spaces Visitor – 1 per 4 dwellings	1 & 2 Bed – 1 space 3 Bed – 1.25 spaces Visitor – 1 per 4 dwellings	No change
Development Contributions	As per Council's S94A Plan.	As per Council's S94A Plan.	No change
Planning Agreement	Not applicable/not required.	\$1.5 million (or works-in-kind)	+\$1.5 million
Affordable Housing	Approx. 16 apartments (4% of GFA)	Approx. 20 apartments (4% of approved GFA, 5% of additional GFA)	+ 4 apartments



Figure 8 - Indicative photomontage from Artarmon Road looking east

Source: CHROFI and Ivolve



Figure 9 - Indicative photomontage from Artarmon Road looking south

Source: CHROFI and Ivolve



Figure 10 - Proposed Master Plan

Source: CHROFI

5.1 Urban Design and Built Form

The following sections outline the key urban design and built form parameters, and should be read in conjunction with the CHROFI Master Plan and Urban Design Report (under separate cover).

5.1.1 Building Envelopes

The amended master plan provides for eight (8) residential building envelopes (plus The Loft) ranging in height between 4 and 12 storeys, as illustrated in **Figure 11. Table 5** below summarises the proposed building height in storeys and the maximum levels of each building.

Building envelopes provided in Drawings 102 to 402 of the CHROFI Master Plan Report are maximum envelopes which set the horizontal and vertical parameters for future buildings and not the final detailed building envelopes. They represent the maximum volume for development on the site, and as such all building articulation, balconies and the like will be required to fit within these envelopes. The purpose of these building envelopes is to restrict the parameters of future development, whilst also enabling a reasonable degree of flexibility so that detail design testing can occur. The envelopes therefore do not represent the final built form outcome for the site, and will be subject to further assessment as part of future DAs.

In addition to the maximum building envelopes for which approval is sought, CHROFI have prepared a reference design that adds detail on the architectural intent and indicative design of each building within the Site. Whilst final buildings will differ from the reference design as the buildings are refined and delivered in accordance with the design excellence process and assessment of individual Development Applications by Council (**Section 5.7**), the reference design provides a clearer expression of the final form of the development and allows for a more accurate and comprehensive environmental assessment of the development.

The proposed building envelopes have been designed and tested to ensure an appropriate interface between the:

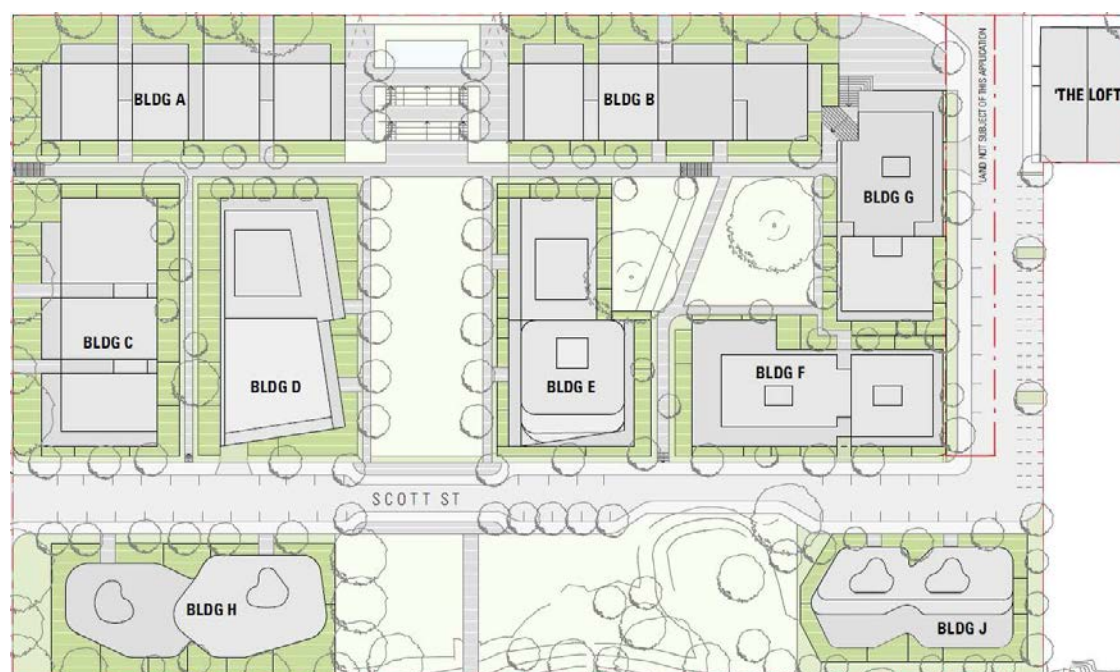
- low-scale buildings to the Artarmon Road and Richmond Avenue street edges to provide a fine-grain and low-scale transition to surrounding residential areas;
- a central core of north-south oriented mid-rise buildings that are generally shielded by the perimeter buildings and minimise their visual impact through orientation; and
- three taller elements located centrally within the site, with smaller floorplates to minimise visual impacts and overshadowing.

Figure 12 provides a comparison of the approved and proposed building envelopes, including those that were considered under Modification No. 1 for completeness. Buildings A, B and C will typically present to the street interfaces as only a two storey building due to the setting down of the lower floor level and the deep street setback to the upper level, as illustrated in **Figure 13**.

A key design development as an outcome of Modification No. 1 is the revised interface between the Site and buildings on the eastern side of Scott Street. As part of this modification, building envelopes have been reallocated to the western side of Scott Street, reducing the number of building envelopes by one and increasing the setback to the existing buildings east of the Site.

Table 5- Summary of proposed building heights²

Building	Height in Storeys	Max RL *(incl. plant)
Building A	4	94.8
Building B	4	94.8
Building C	4	94.8
Building D	7 to 11	101.0 113.3
Building E	8 to 12	104.1 116.4
Building F	7 to 9	97.8 104.0
Building G	7 to 8	94.7 97.8
Building H	4 to 6	89.5 95.6
Building J	3 to 5	88.5
The Loft	2	Existing

**Figure 11 - Reference design illustrating indicative development within amended envelopes**

Source: CHROFI

² Note that the Australian Height Datum (AHD) Reduced Level (RL) is a national measure of height above mean sea level, and is not the height of buildings above ground level. This measure is a more accurate representation of building height, as existing site levels will change over the course of future development of the site.

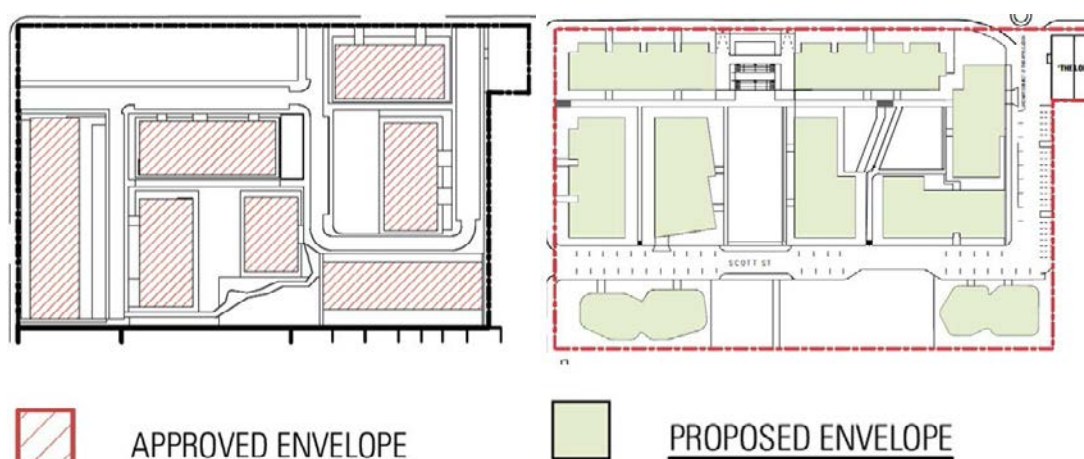


Figure 12 - Comparison of approved envelopes (left and those proposed under Modification No. 2 (right)

Source: CHROFI



Figure 13 - Illustration of design treatment to interface for Buildings A, B and C

Source: CHROFI

5.1.2 Gross Floor Area, Building Volume and Dwellings

Table 6 below summarises the proposed changes to key development parameters resulting for the proposed master plan.

Of particular note is the fact that whilst the gross floor area is proposed to be increased by 24%, through skilful urban design, narrowing of proposed building envelopes and the lowering of site levels through excavation, the actual volume of building envelope above the existing ground levels would in fact be reduced by 11%.

Table 6- Proposed amendments to key developments

	Approved	Proposed	Change
Gross Building Volume	181,727m ³	162,495m ³	-19,232m ³ Reduced by 11%
Gross Floor Area (GFA)	35,886m ²	44,585m ²	+8,699m ² Increased by 24%

	Approved	Proposed	Change
Residential Dwellings	400 dwellings	495 dwellings	+95 dwellings Increased by 24%
Residential GFA	35,886m ²	43,268m ²	+7,382m ² Increased by 21%
Non-residential GFA	c.500m ² + The Loft Building	c.300m ² + The Loft Building	-c.200m ² Decreased by 15%

5.2 Public Open Space and Landscaping

McGregor Coxall Landscape Architecture have worked closely with CHROFI to develop a Landscape Master Plan that is integrated into the overall urban design approach. **Figure 15** below illustrates the open space strategy developed by CHROFI that has informed the revised master plan, whilst **Figure 14** illustrates the more detailed Landscape Master Plan. The Master Plan and Urban Design Report include more detailed design and a description of the proposed landscaping strategy for each public space.

The key change to publicly accessible open space within the Site is the reorientation of primary public open space (the 'Village Green') from an east-west alignment pressed against Artarmon Road, to a north-south alignment that visually extends the line of Edward Street. This amendment will substantially increase the amenity and safety of this public open space, and create a natural public destination at the terminus of Edward Street that provides the potential for a direct connection through to the Walter Street Reserve at the southern edge of the Site – linking the local community to the regional open space network along Flat Rock Creek.



Figure 14 - Revised landscape master plan

Source: McGregor Coxall Landscape Architecture

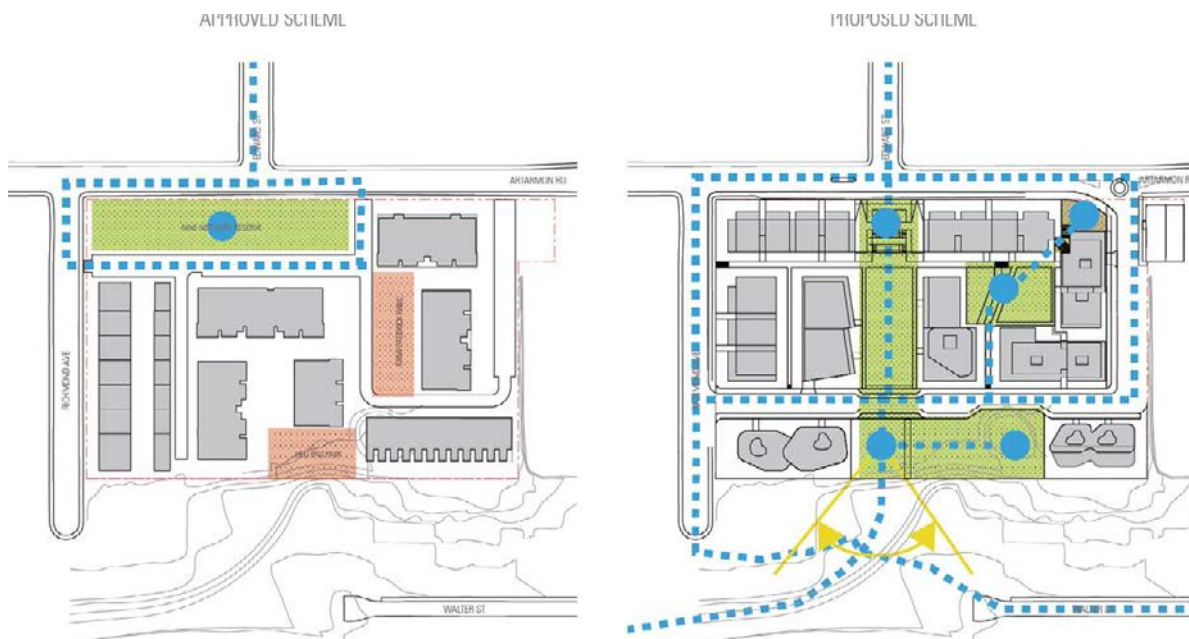


Figure 15 - Public open space strategy, approved scheme (left) & proposed scheme (right)

Source: CHROFI

Significantly, through narrowing the approved building envelopes and rationalising the internal street network, the overall publicly accessible open space will be increased by 164%. Under the Concept Approval only 3,178m² of open space in the form of a narrow park located at the Artarmon Road/ Richmond Avenue intersection was required to be publicly accessible. The existing Concept Approval does not require any of the other open spaces to be publicly accessible as set out in Conditions 12-15 of Schedule 3 of the instrument. As a consequence, the CHROFI master plan now proposes to increase the quantum of publicly accessible open space to 8,396m². These additional areas will be accessible to the public, being designed as a connected network of open space that contrasts to the series of isolated and disconnected open spaces approved under the Concept Plan (refer to **Figures 16 and 17** below).



Figure 16 - Open space area calculations for approved Concept Plan

Source: CHROFI

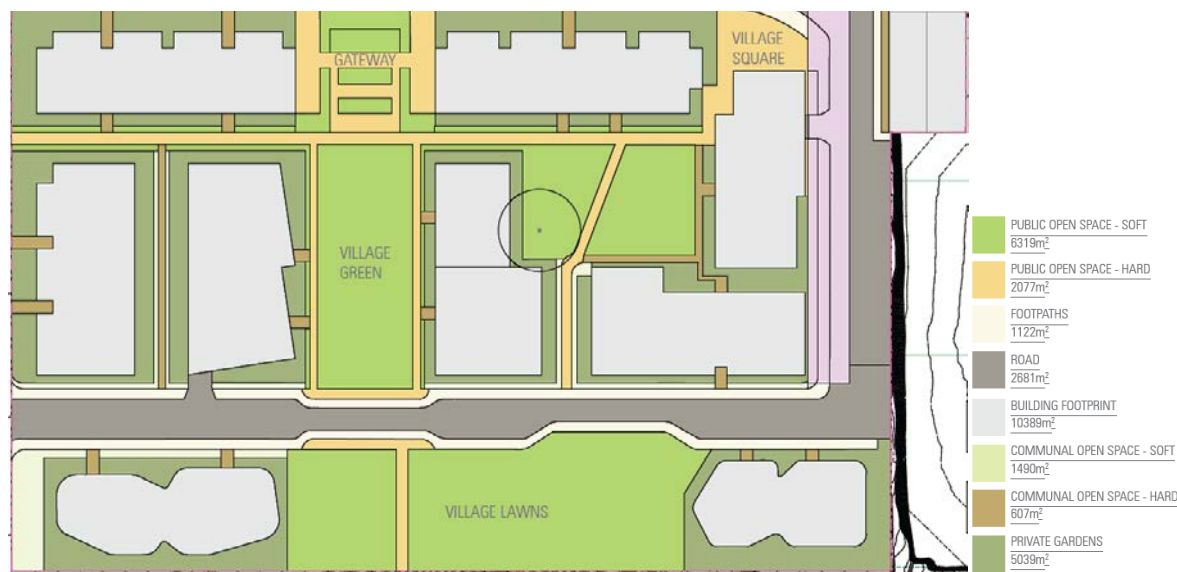


Figure 17 - Open space calculations for Amended CHROFI Master Plan

Source: CHROFI

5.2.1 Public Open Space

A Landscape Master Plan has been prepared by McGregor Coxall for the overall site (**Figure 14**) and each of the unique individual spaces comprising this network. Key features of the public open space network are described below. Public open spaces will be owned and maintained under a Community Title arrangement with a covenant to ensure public access to these spaces. **Figure 15** compares the approved publicly accessible open space configuration with the proposed amended master plan.

Village Square

The Village Square is proposed for the western side of Scott Street adjoining Buildings B and G, with approximate dimensions of 22 metres (width) by 15.5 metres (depth), with an area of approximately 330m². This is comparable in scale with the outdoor seating area of the Incinerator Café on Small Street to the east of the Site. The amended Village Square will continue to benefit from direct northern sunlight and prominent positioning on Artarmon Road. The Square would be bounded by two small commercial tenancies located within the envelopes of Buildings B and G that will activate this space and meet the immediate needs of the local community (e.g. a café). The space will function as a commercial/ community hub, providing a high-amenity space for the community to gather around a small café, leisure or retail offering.

Village Courtyard and Tree 32

Tree 32 is a mature Sydney Blue Gum located in the east of Site; bordered by Building F to the south, Building G to the east, Building B to the north and Building E to the west. This tree is a natural feature that contributes to the setting and amenity of the Site, and is being retained in the updated master plan and set within a new generously proportioned public open space area known as the 'Village Courtyard'.

This courtyard is excess of 1,400m² and generous dimensions of approximately 43.5m (width) by 33m (depth) excluding additional private gardens. The Village Courtyard would include a direct pedestrian connection between the Village Square and Village Green, as well as providing a 12 metre-wide pathway between Buildings E and F to permit a connection through to the Village Land and Walter Street Reserve to the south.

The low-height buildings on the northern side of the Village Courtyard will allow ample natural sunlight to enter this space, whilst landscape terracing required to maintain ground levels around Tree 32 will provide opportunities for seating and passive recreation. It is envisaged that some apartments would include an area of private open space abutting the public space, with clear delineation between public and private open space. **Figure 18** below provides an illustration as to the potential quality and function of the Village Courtyard.



Figure 18 - Proposed Village Courtyard

Source: CHROFI

Internal Pedestrian Circulation

A key recommendation on the design review for Modification 1 is that pedestrian connectivity should be improved between the Village Square and Village Green, given the expected functionality of the Square as a key pedestrian access/egress point toward bus stops on Willoughby Road and the Willoughby Leisure Centre. Whilst the Village Square has been required to be re-designed in response to Council's decision on Scott Street, the Amended CHROFI Master Plan has incorporated a new east-west linkage to provide more direct connections within the site between the Village Square, Village Green and Village Lawns via the newly created Village Courtyard (incorporating the retained Tree 32).

Due to the substantial gradient change between the relocated Village Square and the Village Courtyard, direct access between the Village Square and Courtyard is required to be via stairs. Accessible paths of pedestrian travel to the Courtyard will be available via Artarmon Road and the internal roadway.



Figure 19 - Village Square with sight lines to the Village Courtyard above containing Tree 32

Source: CHROFI

Village Green

The Village Green is a large connected public open space area that is accessed from Artarmon Road, and caters to a range of passive and active recreational uses. It has an area of approximately 1,700m² and comprises of large, gently-sloping lawn areas framed by new shade trees and pedestrian footpaths, creating a high quality and sunlit space for use by the public and future residents.

A small café or kiosk may be located within the southern section of the Village Green that is adjacent to the loop road, providing a destination to draw visitors into the Site and giving parents the opportunity to supervise children playing within the southern sections of the open space. The existing 'bowl' in the site topography has inspired a new children's playground as an interesting and interactive space for children to play within the site, that may also be accessible to the broader regional open space network via new connections through the Walter St Reserve.

5.2.2 Communal and Private Open Space

The Willoughby local area and surrounding streetscapes are characterised by well-maintained private gardens. The CHROFI master plan seeks to respond to and build on this character by providing generous landscaped private gardens and courtyards for ground-floor apartments. These reinforce the fine-grain street character of future buildings, provide a high level of amenity to these apartments, and contribute to the greening of the Site.

Residents will also have access to a diverse range of communal open spaces within the Site, providing a balanced mix of hard and soft landscaped areas. Opportunities for accessible rooftop

terraces and landscaping will be investigated as part of detailed design stage(s) for the Site, to further increase areas of communal and private open space.

Table 7 below summarises the proposed amendments to areas of private and communal open space within the Site. Whilst the quantum of communal open space has been reduced in the proposed scheme, this primarily relates to the conversion of open space areas formerly considered to be communal to public open space areas.

Table 7- Breakdown of open space areas within the approved development

	Approved (m ²)	Proposed (m ²)
Communal Open Space – Hard	961	607
Communal Open Space – Soft	6,178	1,490
Private Open Space – Ground	3,608	5,039
Total	10,747	7,136

5.2.3 Walter Street Reserve

Condition 18 of the existing Concept Plan Approval requires a 'bush track' be provided through the Walter Street Reserve, to connect the southern edge of the Site with the Walter Street roadway. The existing reserve is heavily overgrown and weed-infested, as well as being quite steep in gradient. This modification application will continue to meet this requirement, however, the improved connectivity provided by the revised public open space strategy also offers the opportunity to create a more significant and higher quality connection between the reserve and public open space within the Site.

As part of the proposed public infrastructure contribution (**Section 5.4**) it is proposed to contribute a sum of \$1 million to Council, or undertake works-in-kind to equal value, for the construction of new access pathways and the bush regeneration of the Walter Street Reserve. This could also include new connections to the west to Artarmon Reserve, or improved infrastructure on Walter Street.

Given that the Artarmon Reserve is Council-owned land, it is appropriate that further consultation and collaborative design should occur with Council and the local community to determine the best approach to the upgrade of the Reserve should this s75W Modification Application (and associated public benefit offer) be approved. Willoughby Council would retain full control over this process, as the land owner and governing authority, with the Proponent assisting as required. Recommended conditions requiring that this occur prior to the commencement of works on the Site are included at **Appendix E**.

5.2.4 Tree Removal and Replacement

The amended master plan and landscape concept requires changes to planned tree retention and removal within the Site. Redgum Horticultural have identified 61 existing trees that are nominated for removal and 36 trees that would be retained throughout the proposed works (**Appendix K**), representing an improvement on Modification No. 1. **Figure 20** below illustrates the location of the relevant trees (refer **Appendix K** for detailed plan).

In response to feedback from Willoughby City Council, received during the public exhibition of Modification No.1, particular effort has been made to ensure the retention of the large mature Sydney Blue Gum, Tree 32, through the creation of a new 'Village Courtyard' as described in **Section 5.2.1** of this report.

The Landscape Concept Plan prepared by McGregor Coxall includes an indicative landscaping scheme that models the planting of more than 100 new trees within the Site. The final landscaping scheme would also include a range of shrubs and groundcover planting to substantially increase the greenery of the Site and provide additional visual screening for building forms and their setting. All new trees and shrubs within the Site would be native plant species selected from Willoughby Council's list of recommended species. A new Statement of Commitment to this effect is contained in **Appendix G**.



Figure 20 - Illustration of trees proposed for retention and removal overlain on amended master plan

Source: Redgum Horticultural

5.3 Land Uses

The master plan, as it is proposed to be amended, continues to be for the residential redevelopment of the Site with small ancillary commercial uses to service the needs of new residents. Under the Concept Plan Approval, the following land uses are currently permissible with development consent on the Site:

Residential accommodation; neighbourhood shops; food and drink premises; recreation areas; community facilities; exhibition homes; exhibition villages; recreation facility (indoor).

Following further discussion with the community, it was identified that there is a need to provide additional child care within the locality to support the demand generated by future residential development of the Site. As such, it is proposed to permit 'centre-based child care facility' as an additional permitted use within the Site under the terms of the Concept Approval. Any future Development Application for this use would need to demonstrate satisfactory arrangements for staff parking, child drop-off and pick-up, safety, privacy and compliance with the relevant child care design standards.

5.5 Traffic, Access and Parking

The amended master plan by CHROFI has been prepared in collaboration with the appointed traffic engineers, McLaren Traffic Engineering, in order to deliver a transport strategy that is sufficient, safe and appropriate to the Site's intended development. The key changes to the Concept Proposal are detailed below.

5.5.1 Upgrade to Willoughby Road Intersection

It is the intention of LEPC9 to contribute \$500,000 to Willoughby City Council for upgrades to the intersection of Willoughby Road, Artarmon Road, and Small Street, which has previously been identified by Council in its Willoughby Leisure Centre Master Plan as requiring upgrade.

Figure 22 illustrates Council's 2012 reference design for these works, which would require further detailed refinement by Council and the RMS prior to proceeding. In essence, this upgrade would provide for:

- New right-hand turning lane for north-bound traffic moving into Small St;
- New south-bound slip lane for traffic exiting Small St onto Willoughby Rd;
- New median north on Willoughby Rd north of intersection; and
- Improvements to signal phasing to allow more efficient turning movements

As discussed in **Section 6.7**, this upgrade is not warranted by the proposed modifications to the Concept Approval alone. However, it is acknowledged that the proposed increase of 95 dwellings proposed as part of Modification No.2 is one of a number of cumulative development changes occurring within the locality which will add traffic to this intersection, including development along Willoughby Road and Walter Street as well as the future upgrade of the Willoughby Leisure Centre by Council. The proposed contribution is in addition to the additional Section 94 local infrastructure contributions that would be levied on the additional dwellings proposed.

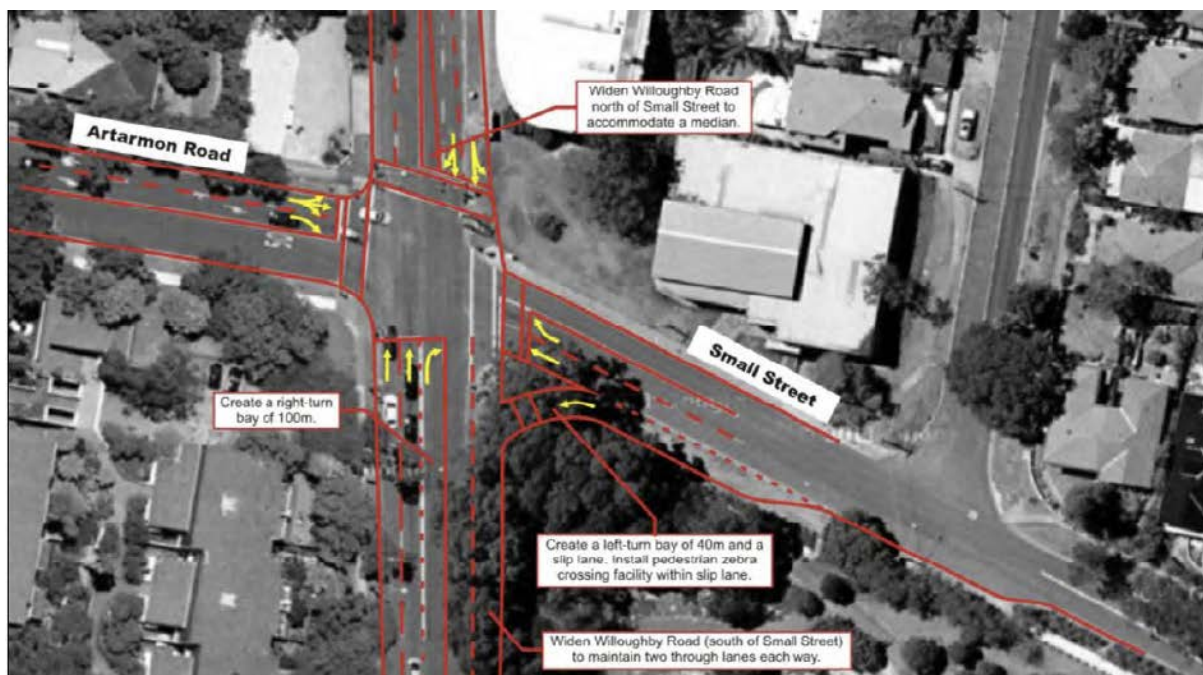


Figure 22 - Council's reference design for the Willoughby Road intersection upgrade

Source: Willoughby Leisure Centre Master Plan, Traffic and Parking Study, GTA Consultants 2012

5.5.2 Site Access and Internal Circulation

This Modification Application seeks to rationalise the approved site access and circulation arrangements to provide a simpler, more efficient and safer connection into the existing road network than is contained in the Concept Plan Approval. By replacing the complicated approved internal road network with a simple loop system, the amended access arrangements would provide for better integration with the local street network whilst also increasing the site area available for use as publicly accessible open space. **Figure 23** illustrates the simplified access and circulation strategy employed, whilst **Table 8** summarises the proposed amendments to the approved site access arrangements.

A new roundabout is proposed at the intersection of Scott Street and Artarmon Road to facilitate improved vehicular movements between the site and Artarmon Road. Separate consent is required under Section 138 of the *Roads Act 1993* for works within a public road. Under section 75V of the EP&A Act, an authorisation under the Roads Act cannot be refused if it is necessary for the carrying out of an approved project in accordance with a Part 3A Concept Plan.

Scott Street will continue to operate as a public road and adjoining road reserve, and will be retained in its current alignment. The internal roadway will act as an extension to the public road, commencing at the southern extent of the Scott Street road reserve. Existing parking on the eastern side of Scott Street (outside of the road reserve) will remain in-situ.

The Richmond Avenue access point has the ability to be limited to a one-way flow in order to reduce the number of vehicles using this local street. McLaren Traffic Engineering have determined that a one-way site entrance at this location would be feasible from a traffic engineering perspective without impacts on the performance of the Artarmon Road site access point. As the community feedback represented the views of only a small number of individuals who raised the matter during pre-submission consultation, the option to limit this as one-way has been included as an option for consideration following further stakeholder feedback during the formal public exhibition period.

Table 8- Proposed amendments to site access arrangements

Location	Approved	Proposed
Richmond Avenue	2-directional site access road	2-directional site access road (with option to limit to 1-way ingress)
Intersection: Richmond Ave and Artarmon Rd	New roundabout.	No new control.
Intersection: Artarmon Rd and Edward St	No new control. New pedestrian refuge, with potential upgrade to pedestrian crossing at western approach.	No new control. New pedestrian refuge, with potential upgrade to pedestrian crossing at western approach.
Artarmon Road	1 new left-in, left-out only site access road to west of Scott Street. Scott Street restricted to left-in, left-out.	Scott Street deleted. New roundabout to single site access road.

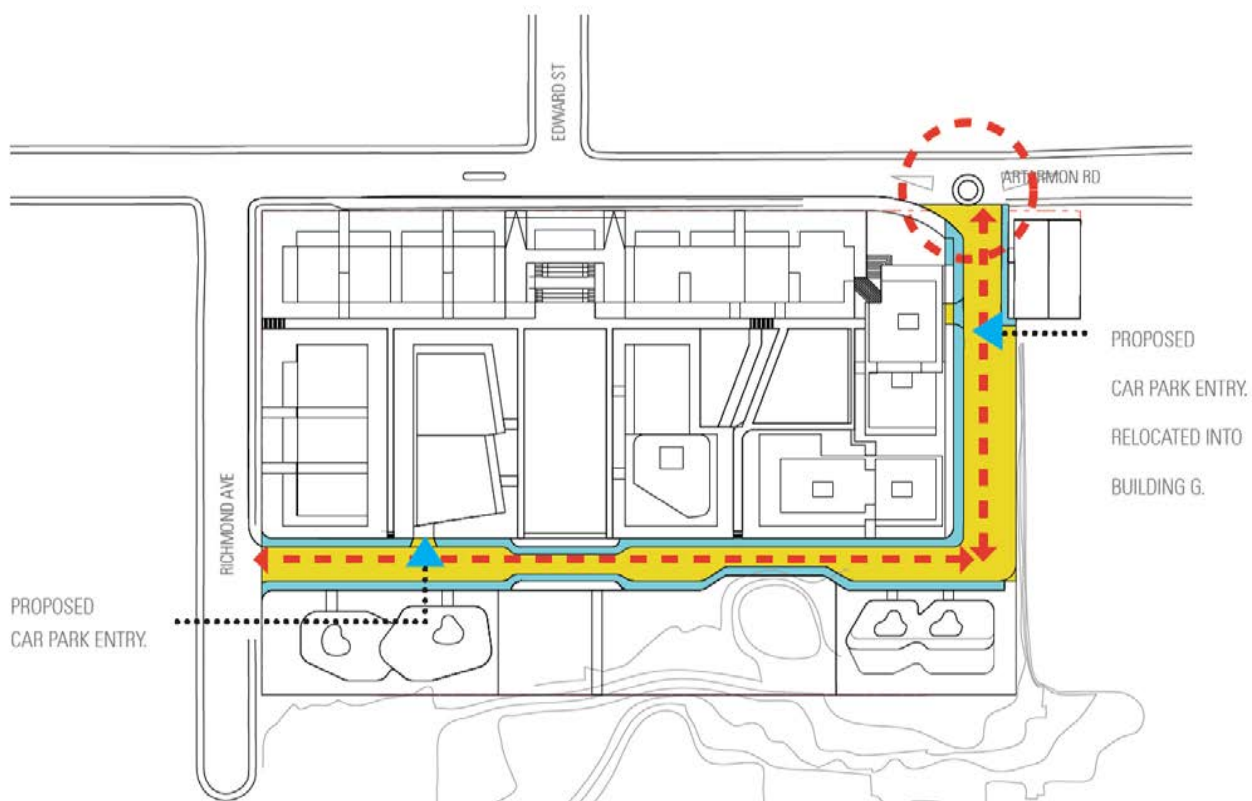


Figure 23 - Proposed site access and internal circulation

Source: CHROFI

5.5.3 Parking

Condition 29 of the Concept Plan Approval currently sets rates for on-site parking and visitor parking. It is not proposed to amend these rates as part of this Modification Application, which are consistent with the Willoughby Development Control Plan 2012 (DCP) and the applicable RMS guidelines for residential apartment buildings. Condition 29 also requires that parking for ancillary non-residential uses within the Site be in accordance with the provisions of the Willoughby DCP.

All residential parking will be located in the basement of buildings on Site and will only be accessed from the internal loop road (no additional driveways to Artarmon Road or Richmond Avenue). This is in the form of two vehicular driveways to the basement, which have been carefully positioned to align with the retained and extended Scott Street, and the need to facilitate landscaping and public pedestrian access in the space between buildings. Both basement driveways are contained within building envelopes (Buildings D and G) in order to facilitate for pedestrian connections and landscaping in the spaces between buildings. In particular, the Building G ramp has been located in direct response to a recommendation of Allen Jack + Cottier on behalf of Willoughby Council in relation to Modification No.1 in order to strengthen internal east-west connections between the Village Green and the Village Plaza and to retain Tree 32. Service vehicles for waste collection and deliveries would utilise the Building D driveway only.

Condition 30 of the Concept Plan Approval requires that, where possible, visitor parking required under Condition 29 be provided kerbside on the internal street network. This will be maintained within the amended master plan, with the simpler internal loop road structure providing for clearer access to on-street spaces for visitors to the Site. The retention of Scott Street has also allowed

for the existing 90°-angle parking on the eastern side of Scott Street to be maintained, increasing the quantum of this at-grade parking from 57 to 66 spaces.

Condition 31 of the Concept Plan Approval requires car sharing vehicles to be provided on Site. No change is proposed to this condition. It is expected that car share parking spaces will be provided kerbside on the internal loop road, subject to detailed design and consultation with Council and a car share provider prior to the submission of a Development Application for the construction of this road.

5.6 Project Staging

An indicative staging plan (**Figure 24**) has been prepared to illustrate the likely delivery phases for buildings and public domain areas, and estimate the number of people associated with the construction and operation of the project. This plan is indicative only, as the actual staging will be dependent on market conditions and demand at the time of development. It is proposed that an updated Staging Plan be submitted to Council with the first Development Application, and each subsequent development application for the Site.

Proposed public and communal open space within the Site will also be staged in accordance with **Figure 24**, with the portion of open space within each stage to be completed prior to issuing of an Occupation Certificate for the dwellings within that development stage.

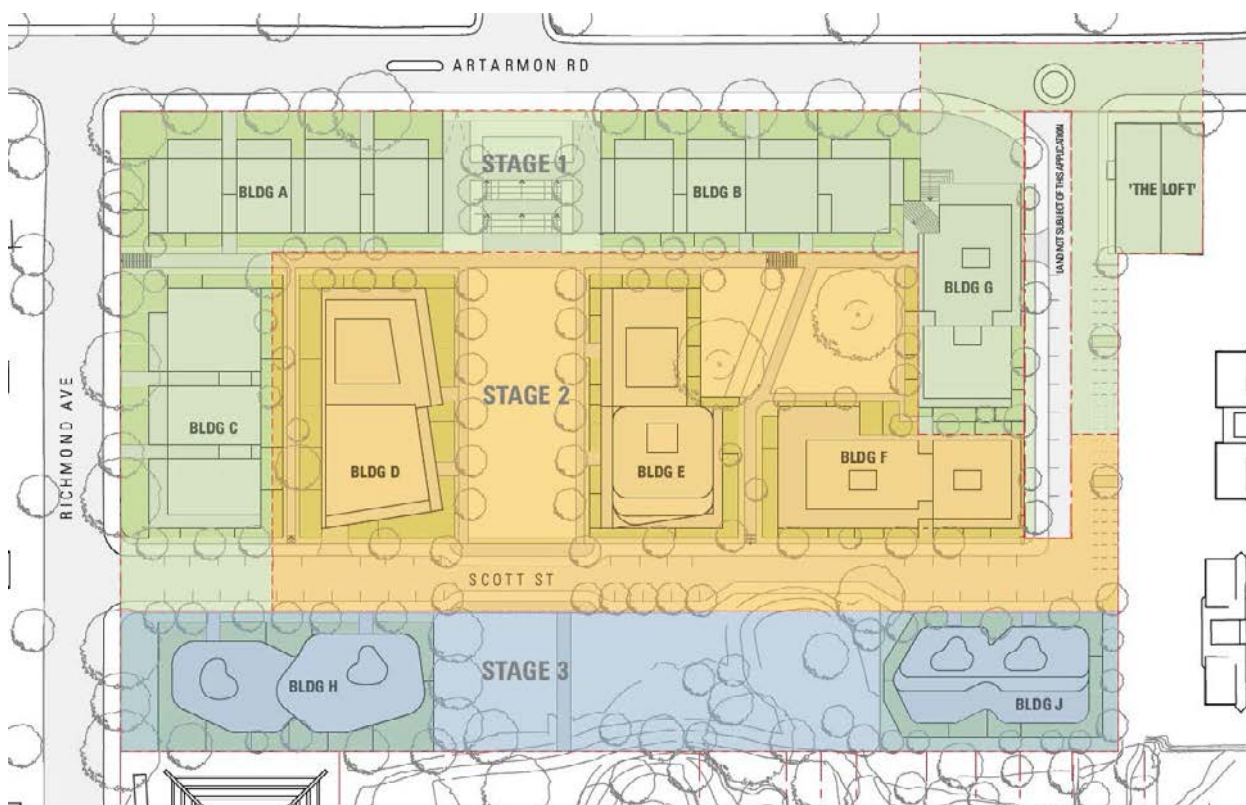


Figure 24 - Indicative staging plan

Source: CHROFI

5.7 Design Excellence

Conditions 1 and 2 of the Concept Plan Approval require that future Development Applications for buildings demonstrate a high standard of architectural design and a diversity of architectural responses. These conditions are not proposed to be changed, and are strongly supported by the proponent-led design process undertaken to date.

The amended master plan is the outcome of ongoing design development, and is informed by the voluntary architectural design competition convened by LEPC9. Whilst this design competition was held in relation to Modification No. 1, this application represents a progression from the competition winning scheme, and as such continues to support the attainment of design excellence from the outset of the project.

At the detailed Development Application stage, a number of Australia's leading urban design and architecture firms that participated in the original competition will be engaged to design individual buildings within the site, and provide diversity in architectural character under the guidance of CHROFI as the master plan architect and Mr Andrew Andersons AO as the executive architect. This design excellence process is a tried and tested model that has been used to deliver some of Sydney's best places.

6.0 Environmental Assessment

Table 9 provides a detailed summary of the individual matters listed in the Secretary's Environmental Assessment Requirements (SEARs) for Modification No.1 to Concept Plan MP10_0198. These SEARs are considered to continue to be relevant to the current Modification Application No.2. **Table 9** identifies the relevant sections in the report which address the matters identified and accompanying technical studies for further discussion. Further detail of compliance with the objectives of the EPIs, policies and guidelines which are required to be addressed are provided in **Appendix Q**.

Table 9- Secretary's Environmental Assessment Requirements

Requirements	Location in Report/Appendix
Notwithstanding the key issues specified below, the EA must include an environmental risk assessment to identify the potential environmental impacts associated with the development. Where relevant, the assessment of the key issues below, and any other significant issues identified in the risk assessment, must include: - adequate baseline data; - consideration of potential cumulative impacts due to other development in the vicinity; and - measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment. The EA must be accompanied by a report from a qualified quantity surveyor providing: - a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the EP&A Regulation 2000) of the proposal, including details of all assumptions and components from which the CIV calculation is derived; - an estimate of the jobs that will be created by the future development during the construction and operational phases of the development; and - certification that the information provided is accurate at the date of preparation.	Appendix I Planning Report, Technical Appendices and CHROFI Master Plan Report Provided under separate cover
Key Issues	
1. Relevant EPIs, Policies, and Guidelines to be addressed	
The EA shall address the statutory provisions applying to the site contained in all relevant Environmental Planning Instruments, including: State Environmental Planning Policy (Infrastructure) 2007	Appendix J

Requirements	Location in Report/Appendix
State Environmental Planning Policy No. 19 - Bushland in Urban Areas	Section 6.2.4
State Environmental Planning Policy No. 55 – Remediation of Land	Refer to Appendix J of original Concept Plan Environmental Assessment Report.
State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development	CHROFI Master Plan Report and Section 6.2.3
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004	Section 6.8.1
Willoughby Local Environment Plan 2012.	Section 6.2.2
The EA shall also address relevant planning provisions, goals and strategic planning objectives in the following: A Plan for Growing Sydney	Section 6.1.1
NSW Long Term Transport Master Plan	Appendix J
Development Near Rail Corridors and Busy Roads – Interim Guideline	Appendix G
Guide to Traffic Generating Developments	Section 6.7 and Appendix J
NSW Bicycle Guidelines	
NSW Planning Guidelines for Walking and Cycling	
Crime Prevention Through Environmental Design Principles	Section 6.8.5
Heritage Council Guidelines, Design in Context – guidelines for infill development in the Historic Environment (2005)	Appendix L
Heritage Council Guidelines in Heritage Curtilages (1996)	
Willoughby City Strategy	Section 6.1.4
Willoughby Development Control Plan	Section 6.2.2
2. Comparison with the concept approval (MP10_0198)	
The EA shall: demonstrate how the proposed modification can be assessed and determined within the scope of Section 75W of the Environmental Planning and Assessment Act 1979, and in particular shall demonstrate that the proposal has limited environmental impacts beyond those already assessed for the concept approval	Section 6.2.1

Requirements	Location in Report/Appendix
provide a comparative assessment of the proposed modification against the approved scheme (qualitative and quantitative), including comparison plans clearly identifying the proposed amendments in plan and elevation, and provide a rationale for the amendments and an analysis of benefits / impacts, including measures to mitigate any potential impacts; and	Section 5.0 and 6.0, Appended Design and Technical Statements
outline and justify any proposed changes to the existing terms of approval, future assessment requirements and commitments	Section 5.0 and Appendix G
3. Ecologically Sustainable Development (ESD)	
The EA shall: identify how best practice ESD principles have been incorporated in the design, construction and ongoing operation phases of the development, and include innovative and best practice proposals for environmental building performance; and	Section 6.9.1, Appendix G and CHROFI Master Plan Report
demonstrate that the development has been assessed against a suitably accredited rating scheme to meet industry best practice.	
4. Pre-submission consultation statement	
The EIS must describe the pre-submission consultation and community engagement process, issues raised and how the proposed development has been amended in response to these issues. A short explanation should be provided where amendments have not been made to address an issue.	Section 4.0 and Appendix D
5. Design excellence, built form and public domain	
The EA shall: provide an assessment of any environmental impacts on the surrounding area, such as overshadowing, solar access, acoustic privacy, visual privacy, view loss and micro climatic impacts and propose measures to mitigate any impacts;	Section 6.0 and CHROFI Master Plan Report
demonstrate that the concept proposal is capable of complying with SEPP 65 – Design Quality of Residential Apartment Development and the Apartment Design Guide, including justification for any compliance / non-compliance;	Section 6.2.3 and CHROFI Master Plan Report
address any visual impact with regards to the adjacent telecommunications tower; and	Section 6.2 and 6.5 and CHROFI Master Plan Report

Requirements	Location in Report/Appendix
provide details of proposed adaptable housing in accordance with Section C6 of the Willoughby Development Control Plan (Section C6).	No change to approved condition, refer to Appendix G
7. Traffic and transport	
The EA shall include a new or updated traffic and transport assessment taking into account any changes in relation to:	
current daily and peak hour vehicle, public transport, pedestrian and bicycle movements, together with the existing traffic and transport infrastructure provided in the area;	Section 5.5 and 6.7 and Appendix J
existing and future performance of key intersections providing access to the Site, including Artarmon Road/Willoughby Road/Small Street, and any road/intersection upgrades required to accommodate the modified development	
the operation of transport networks, including rail and bus, having regard to service levels, usage and the ability to accommodate the forecast number of trips;	
measures to encourage users of the development to make sustainable travel choices, including proposals to improve walking, cycling, public transport and car sharing; and	
on-Site car parking provision and arrangements for access, loading and deliveries, including details of service vehicle movements.	
8. Drainage and groundwater	
The EA shall address drainage issues associated with the development/Site, including erosion and sediment control, stormwater, drainage infrastructure and incorporation of Water Sensitive Urban Design measures, including stormwater and grey water reuse in buildings.	Section 6.9.6 and Appendix G
9. Contributions and/or Voluntary Planning Agreement	
The EA shall address the provision of public benefit, services and infrastructure having regard to Council's Section 94A Contribution Plan and/or provide details of any Voluntary Planning Agreements or other legally binding instrument proposed to facilitate this development as agreed between Council and the proponent.	Section 5.4 and Appendix H
10. Statement of commitments	

Requirements	Location in Report/Appendix
The EA must include a draft Statement of Commitments detailing measures for environmental management, mitigation measures and monitoring for the project.	Appendix G
Plans and Documents	
The EA must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the <i>EP&A Regulation 2000</i> . Provide these as part of the EA rather than as separate documents. In addition, the EA must include the following:	
Site analysis plan	CHROFI Master Plan Report
Site survey plan, showing existing levels, location and height of existing and adjacent structures/buildings	
locality / context plan	
building envelopes showing the relationship with proposed and existing buildings in the locality;	
architectural drawings (to a usable scale at A3);	
plans, elevations, sections and photomontages clearly showing the proposed amendments compared to the concept approval	
schedule of proposed gross floor area per land use	
shadow diagrams	
wind impact assessment	
assessment against SEPP 65 and the ADG	
ESD statement	CHROFI Master Plan Report
pre-submission consultation statement	Appendix D
heritage impact assessment	Appendix L
traffic and parking assessment	Appendix J
visual and view impact analysis and photomontages	CHROFI Master Plan Report
physical model	Provided under separate cover
public domain plans, including a landscape master plan	CHROFI Master Plan Report
geotechnical and structural report	Section 6.9.7
assessment of electronic radiation impacts	Appendix N

Requirements	Location in Report/Appendix
Consultation	
During the preparation of the EA, you are required to consult with the relevant local, State or Commonwealth Government authorities, service providers, and community.	Appendix D

6.1 Strategic Planning Policies

6.1.1 A Plan for Growing Sydney

A Plan for Growing Sydney, the NSW Government's metropolitan strategy, was released in December 2014. This strategy establishes key goals and objectives to guide the development of Sydney over the next 20 years. The following key goals have been established:

1. A competitive economy with world-class services and transport;
- 2. A city of housing choice with homes that meet our needs and lifestyles;**
3. A great place to live with communities that are strong, healthy and well connected; and
4. A sustainable and resilient city that protects the natural environment and has a balanced approach to the use of land and resources.

A clear direction of *A Plan for Growing Sydney* is that housing supply needs to be accelerated to deliver new housing in Sydney in order to meet the needs of a larger than forecast population and to satisfy demand for different types of housing. Under this goal there are three relevant key directions which include:

- accelerate housing supply across Sydney;
- accelerate urban renewal across Sydney – providing homes closer to jobs; and
- improve housing choice to suit different needs and lifestyles.

The proposed modifications to the Concept Plan Approval will directly assist in meeting these key directives, consistent with the strategic vision of Sydney. This is discussed further below:

Housing Supply

A Plan for Growing Sydney adopts the 2014 Population, Household and Dwelling Projections for NSW produced by the Department. These forecasts indicate that population growth within the Sydney metropolitan area will occur at a significantly faster rate than had been projected as part of the preceding metropolitan and subregional strategic planning documents.

At the time of the original Concept Plan application (and during the preparation of the Willoughby Local Environmental Plan 2012) the Draft Inner North Subregional Strategy set dwelling targets for the Willoughby LGA, which required the delivery of 272 new dwellings each year. Under the 2014 Projections, it is forecast that projected household growth will require the delivery of 433 new dwellings in Willoughby each year, a 59% increase on the previous target.

As can be seen in **Figure 25** below, actual dwelling completions over the past 14 years has averaged only 237 dwellings per annum, with completions exceeding the projected requirement of 433 in only two years. Given that actual housing production has consistently fallen short of both the dwelling targets under the Draft Inner North Subregional Strategy and the 2014 Projections, there is clearly a need to support additional housing production beyond planned capacity.

There is therefore considerable planning merit in supporting additional opportunities for well-designed housing density on the Site in order to make a further small but significant contribution toward local housing supply. This is particularly pressing given the long-term shortfall in housing production within the LGA and the increase in projected housing requirements.

Dwelling Completions - Willoughby LGA

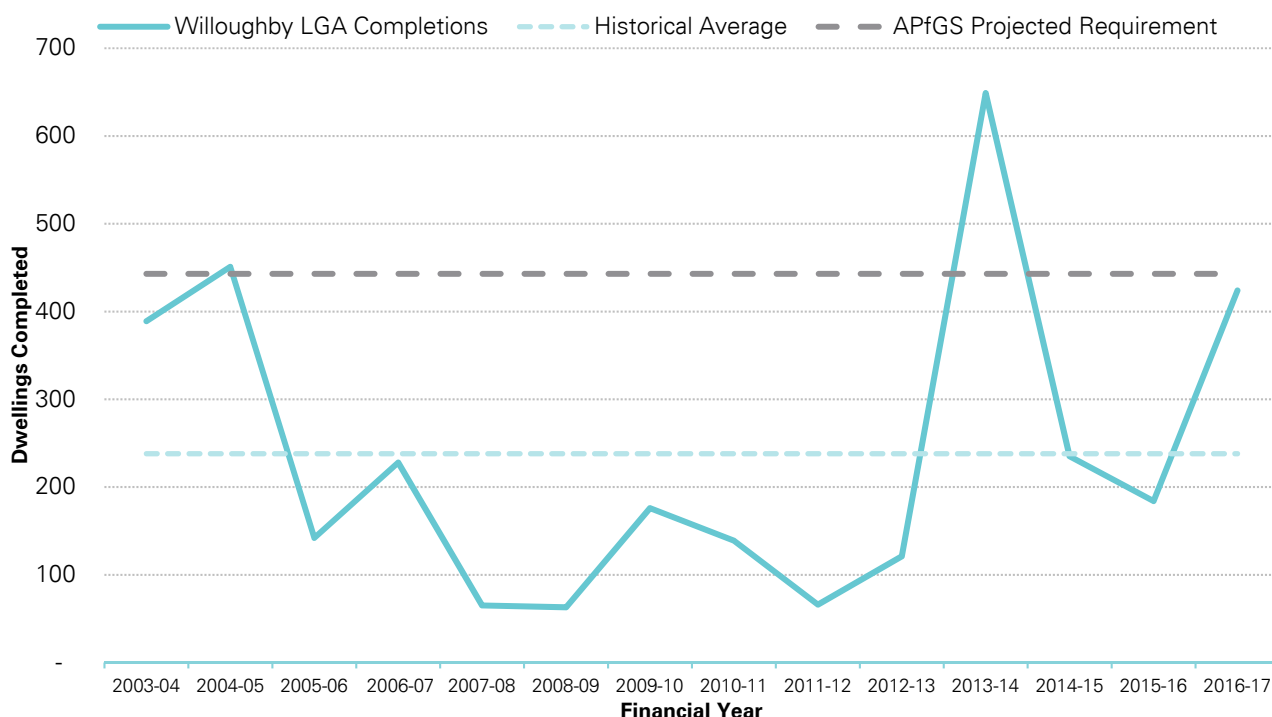


Figure 25 - Comparison of historical dwelling completions and projected requirement

Data Source: NSW Department of Planning & Environment

Urban Renewal

The second direction for improving Sydney's housing choices relates to accelerating urban renewal within or around centres, to provide for new housing that is accessible to services and facilities and does not place additional strain on the delivery of new infrastructure.

The delivery of the modified Concept Plan is commensurate with this direction by assisting with the urban renewal of the Site to provide additional housing choice in an accessible and desirable location. The Site is well serviced by a number of nearby employment and service/retail centres that enable people to live near jobs, including North Sydney and the Sydney CBD, as well as designated Strategic Centres at Chatswood and St Leonards.

Housing Choice

A Plan for Growing Sydney recognises that mixed housing typologies are required to meet the needs of the housing market. The provision of housing choice is to be underpinned by good design. With the

provision of additional housing, in a range of different types and sizes, it is expected that the overall supply of housing will be boosted and housing affordability will be improved.

The proposed modified scheme for the Site will deliver housing that diversifies the typologies available in the surrounding locality, and contributes to overall housing choice. In facilitating the future provision of apartments on the Site, the modified proposal can better adapt and directly respond to market demands. This means that the dwellings can vary in style, size and mix to be reflective of the housing needs in the local area.

The proposed increase in the yield of the site will also improve housing affordability through access to supply, which is considered to be a critical issue in Sydney. This is also principally assisted by the increase in the number of affordable dwellings provided on the site.

6.1.2 Draft Greater Sydney Regional Plan 2017

The Greater Sydney Commission (GSC) released the *Draft Greater Sydney Regional Plan* in October 2017, which is proposed to supersede the *A Plan for Growing Sydney*. The Draft Regional Plan is not currently government policy. This proposed modification to the Concept Plan Approval responds to the key priorities outlined in the Draft Regional Plan as it:

- delivers additional housing capacity in close proximity of existing employment centres, public transport connections, and local services and amenities, supporting the realisation of the '30-minute city' (whereby a majority of residents are within a 30-minute commute of their workplace);
- recognises that there is a need to accelerate housing growth and accommodate for higher forecast rates of population growth, which are over and above what was considered in *A Plan for Growing Sydney*;
- takes into consideration the impact of demographic shifts, such as a potential increase in school-aged children, which is discussed further in **Section 6.9**;
- increases housing supply, support a range of housing choices, and will provide affordable housing, to broaden choice and diversity and assist with recognised affordability issues within Greater Sydney; and
- will increase the amount of open space provided to the general public and future residents of the Site, and will conserve or make a feature of important natural features such as significant trees, the 'bowl' in the landscape, and bushland in the south of the Site.

6.1.3 Draft North District Plan

In October 2017, the GSC released the updated Draft District Plans for the Greater Sydney Metropolitan Region for re-exhibition. The draft District Plans seek to bridge the gap between the Draft Regional Plan and Council's Local Environmental Plans giving effect to the metropolitan goals and planning priorities by setting out priorities and actions for each District. The Draft North District Plan has identified this region of Sydney as a series of connected productive centres that benefit from access to the natural environment, and their improved physical and economic links to major centres across Greater Sydney.

The plan establishes key priorities for achieving its vision for Sydney's North, which is addressed in the modified Concept Proposal, including:

- contributing to the delivery of an additional 25,950 dwellings in the North District over the next five years, with 1,250 homes to be provided within the Willoughby LGA, in order to address pent up demand that has resulted from past undersupply;
- investigating local opportunities to address housing demand and diversity in and around local centres and infill areas;
- renewing land within an existing urban area with connections to public transport and other existing infrastructure, to better link where people work, live, and play and help create the desired '30-minute city';
- embodying the nine liveability outcomes of the 'Liveability Framework', including:
 - support for greater housing choice and specifically affordable housing;
 - delivering high quality architecture and design excellence;
 - revitalising public domain areas to support walking and cycling;
 - encouraging access to the natural environment both within and surrounding the Site; and
 - designing for both the existing and future local community to foster a sense of inclusiveness and cohesion;
- providing design-led planning, whereby the Concept Proposal has been the subject of substantial community consultation and design development to identify the key strengths of the Site and ways to enhance the development outcome, supporting high quality urban design;
- enhancing existing pedestrian pathways and providing for future connections within the Site and to the surrounding locality and open space networks;
- delivering a scheme that appropriately interfaces with the surrounding heritage conservation area, and has the potential through further detailed design to provide a positive relationship with this heritage; and
- creating opportunities for more recreation and community facilities in the form of additional public open space and a new child care centre.

The Draft North District Plan is structured around three central concepts – productivity, liveability and sustainability. The Modification Application's consistency with these concepts is discussed in further detail in the following sections.

Productivity

A key concept in the Draft North District Plan is the promotion of new housing supply in proximity to jobs. The '30 minute city' concept is a key expression of this target, referring to the number of jobs accessible from a specified location as a representation of access to employment opportunities from one's home. GIS analysis undertaken by Ethos Urban indicates that the site is highly accessible to metropolitan jobs via both public transport and private vehicle. Within 30 minutes by public transport, an individual leaving the site during a typical morning peak period can access approximately 400,000 jobs, or approximately 20% of jobs within the Sydney metropolitan area. By private vehicle, this total rises to approximately 700,000 jobs or approximately 35% of Sydney's total jobs. The site is located in close proximity to a high-frequency bus corridor connecting to several major employment centres, and has good access to the Sydney Orbital Motorway Network. As such, the provision of additional housing on this site directly supports the Greater Sydney Commission's objective of increasing housing supply close to employment.

Liveability

Design-led planning

The creation of great places, with high quality design that facilitate new and enhanced usage of open space, walking and cycling is a key priority within the liveability concept under the Draft North District Plan. This Modification Application seeks to significantly enhance the approved Concept Plan to specifically respond to these principles. The Proponent voluntarily undertook a competitive design process to select the current CHROFI master plan, which delivers an increase in both quantity and quality of public open space in comparison to the existing approval. New connections are provided to the existing public open space corridor, or 'Green Grid', is facilitated through the connection into the currently isolated Walter Street Reserve.

Housing diversity

Liveability also refers to the housing needs of the current and future population of the North District. Detached dwellings currently comprise almost 60% of existing dwelling stock within the North District, whereas family and multi-family households comprise less than 40% of all households. The NSW Department of Planning and Environment project that the 65-84 age group will be the fastest-growing age group within the District over the period to 2036, with the 50-64 age bracket providing the second-highest quantum of growth. These population factors lend themselves to a need for more compact, accessible and lower-maintenance housing typologies such as apartments for down-sizers. Factors that are important in the facilitation of down-sizing (which in turn frees up existing housing stock suitable for families) include the integration of new housing into existing communities, provision of high quality design outcomes and good residential amenity, and access to a range of local services and public transport.

The redevelopment of the subject site has the potential to improve housing diversity within a locality that has a high proportion of detached dwelling stock. The site is located in close proximity to existing public transport services, the Willoughby Road shops and a substantial local open space network, making it suitable for a range of households including down-sizers from within the local area. The final development would incorporate a range of dwelling sizes and configurations in order to meet the diverse housing needs of the existing and future local community.

This Modification Application seeks to build on the strengths of the location by providing a high-quality design-led master plan for the site that will deliver a high level of residential amenity, better integrate the site with the local community whilst reducing local environmental impacts in comparison to the approved scheme.

Housing supply

As well as a changing demographic profile, the Draft North District Plans also identify broad-scale population growth projected to occur within the District which will create demand for additional housing. The levels of population growth identified in the Draft North District Plan exceed previous expectations factored into state and local strategic planning, and demand new planning responses to unlock potential housing supply. This Modification Application demonstrates that there is an opportunity to deliver additional housing supply via the redevelopment of the subject site through a new, improved urban design approach whilst not giving rise to any additional environmental impacts.

Housing affordability

The existing Concept Plan Approval already provides for 4% of gross floor area (in the form of finished dwellings) to be dedicated to Council as affordable rental housing, consistent with Willoughby City Council's affordable housing principles.

The Draft North District Plan proposes that an affordable rental housing target of 5-10% of additional floor space be adopted for new rezoning precincts where there is an identified need for affordable housing, subject to further work by the GSC in relation to implementation, feasibility and timing. In response to this, the Proponent has committed to a 5% affordable rental housing provision for any additional gross floor area approved as part of this Modification Application. This will provide additional affordable rental housing within the Willoughby area, delivering further social and economic benefits associated with the project.

Sustainability

A key initiative of the Draft District Plan is the further development of the Green Grid concept for Sydney. The Modification Application contributes to the Green Grid by:

- Providing additional publicly accessible green open space within the site catering to a range of active and passive recreational activities;
- Connects public open space provided within the site to the existing local street network and facilitates new connections between the existing Willoughby community and the local open space corridor running east-west to the south of the site;
- Providing a new monetary contribution toward the upgrade of the Walter Street Reserve, which is currently under-utilised and isolated, increasing its quality and value to the community.

These initiatives will contribute toward the amenity of the Willoughby local area by improving connectivity and access to existing open space corridors, enhancing the quality of existing open space resources, and providing new high-quality open space areas which complement the existing open space offerings within the area.

6.1.4 Willoughby City Strategy

The *Willoughby City Strategy Community Strategic Plan 2013-2029* (the Strategy) establishes the broad strategic directions for the future of the Willoughby LGA and covers issues such as community and cultural life, the natural environment, housing, transport, the local economy and civic leadership. The proposed modifications to the Concept Plan approval are considered to be consistent with the Strategy by:

- Increasing the amount of publicly accessible open space within the Willoughby LGA through the provision of a larger and better-connected space within the Site;
- Support environmental objectives by contributing to the regeneration of the Walter Street Reserve in conjunction with Council;
- Promoting healthy living by locating new development in close proximity to local and regional open space and recreation networks, including key cycling and walking routes;
- Ensuring that future residential development achieves a high standard of environmental performance;

- Providing for increased housing choice within the Willoughby and Artarmon communities by delivering high quality residential apartment living with a mix of apartment styles and sizes;
- Facilitating the delivery of additional affordable housing within the Willoughby LGA;
- Ensuring appropriate interfaces and transitions between new housing development and established residential and heritage conservation areas;
- Contributing to the improvement of existing local traffic congestions through a voluntary contribution to the upgrade of Willoughby Road, Artarmon Road and Small Street; and
- Locating new development close to an established public transit corridor.

Council is currently in the initial stages of updating the Strategy, with the exhibition of a number of preliminary discussion documents between 3 February and 17 March 2017. Whilst not formal policy documents, a number of these position statements are nonetheless considered to be relevant to the future development of the Channel Nine Site.

Local Centres Position Statement

A Local Centres Position Statement was publicly exhibited by Council in February 2017. The position statement addresses the functions and character of smaller local centres, tests them against metropolitan and local planning objectives, and starts a discussion around opportunities for growth in housing and employment. Such local centres in proximity of the Site include the centre around Artarmon Station, the Artarmon Industrial precinct, and two local centres at Willoughby Road, Willoughby (refer to **Figure 26** below). The position statement demonstrates that the Site is well positioned to benefit from existing centres of activity and employment in the LGA.

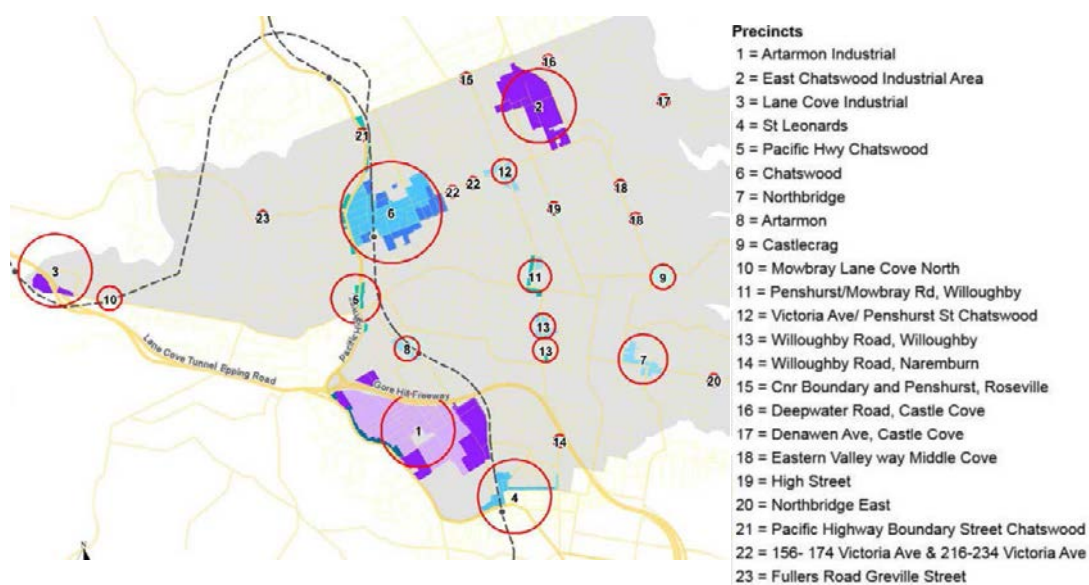


Figure 26 - Major and local centres in the Willoughby LGA
Source: Local Centres Position Statement & SGS

Willoughby Housing Position Statement for Discussion 2017

As part of its review of the Strategy, Council also prepared a Housing Position Statement, which was publicly exhibited in February 2017. This position statement discusses the future housing needs of Willoughby City residents over the next 20 years in response to the growing and changing population, and nominates key principles to inform future housing expansion in the LGA.

An identified intent of the position statement is to encourage new housing within a 400m walking distance of existing centres and in areas zoned for higher densities. Willoughby Road Shops between Mowbray and Artarmon Road is identified as a local centre and an area for investigation, with the Site falling within the catchment area for this centre (refer to **Figure 27** below). In light of this, the proposed increase in housing within the catchment area of an identified centre is commensurate with a key intention of Council's position statement and supports their desire to stimulate development.

Further, an assessment of the of Willoughby's housing and population characteristics and needs aligns with the outcome being delivered by the proposal, as:

- the proposed modification is commensurate with a recognised need to provide further residential development to meet demand;
- the proposed modification will contribute to housing choice to address the substantial forecast increase in single person household types and seniors as the highest forecast population group;
- the proposed modification will assist in meeting forecast demand for between 6,000 and 6,7000 dwellings by 2036; and
- the proposed modification has been the subject of extensive ongoing design development, including an architectural design competition, and as such delivers good quality urban design and the development of attractive streetscapes (refer to **Section 6.3** and **6.4** below).

The position statement also identifies the following principles to be taken into consideration when identifying areas that have the potential to accommodate additional density:

- Located close to public transport – the Site is located between 150 and 350 metres walking distance from bus stops on Willoughby Road located immediately to the north of the Artarmon Road intersection, and is considered to be extremely well-served by public transport (refer to **Section 6.7.3**);
- Heritage significance is not compromised – an assessment of potential heritage impacts confirms that they are substantially the same as those assessed and approved under the Concept Approval (refer to **Section 6.8**);
- The scenic qualities and ecological values of environmentally sensitive natural areas – the proposal appropriately interfaces with the surrounding area and delivers significant public benefits in terms of new public open space areas and bushland regeneration (refer to **Section 6.4** and **6.6**);
- Not to occur in areas of bushfire risk – the Site is not identified as bushfire prone land;
- The capacity of existing infrastructure is considered – the Site can be appropriately serviced by existing and planned infrastructure (refer to **Section 6.9.2** and **6.7.3**);
- Impacts of development on traffic movements – notwithstanding the increase in traffic generation from the Site, the refined traffic arrangements and proposed contribution to the Willoughby Rd intersection will result in a net improvement to traffic conditions (refer to **Section 6.7.1**);

- Where possible, new pedestrian and cycling linkages will be required – the proposal provides for a significantly more permeable and walkable development outcome that would encourage members of the public and future residents to walk and cycle through the Site (refer to **Section 6.7.4**);
- Any additional density will be provided near existing business centres – this is evident in **Figure 25** below, which indicates that the site is within the walking catchment of the Willoughby Road precinct;
- Increase in population to be matched by social planning considerations – the proposed modification seeks to enable a child care to be delivered, will provide a greater quantity of public open space, and has taken into consideration demand for schools in the area (refer to **Section 6.6** and **6.9.2**); and
- Quality of existing housing stock – there is a recognised need to accelerate housing and urban renewal and improve housing choice in order to cater for growing demand and demographic shifts.

In light of the above the proposed improvements to the master plan for the Channel Nine Site, including the provision of additional housing, are considered to support Council's aims and objectives as outlined in this Draft Position Statement.

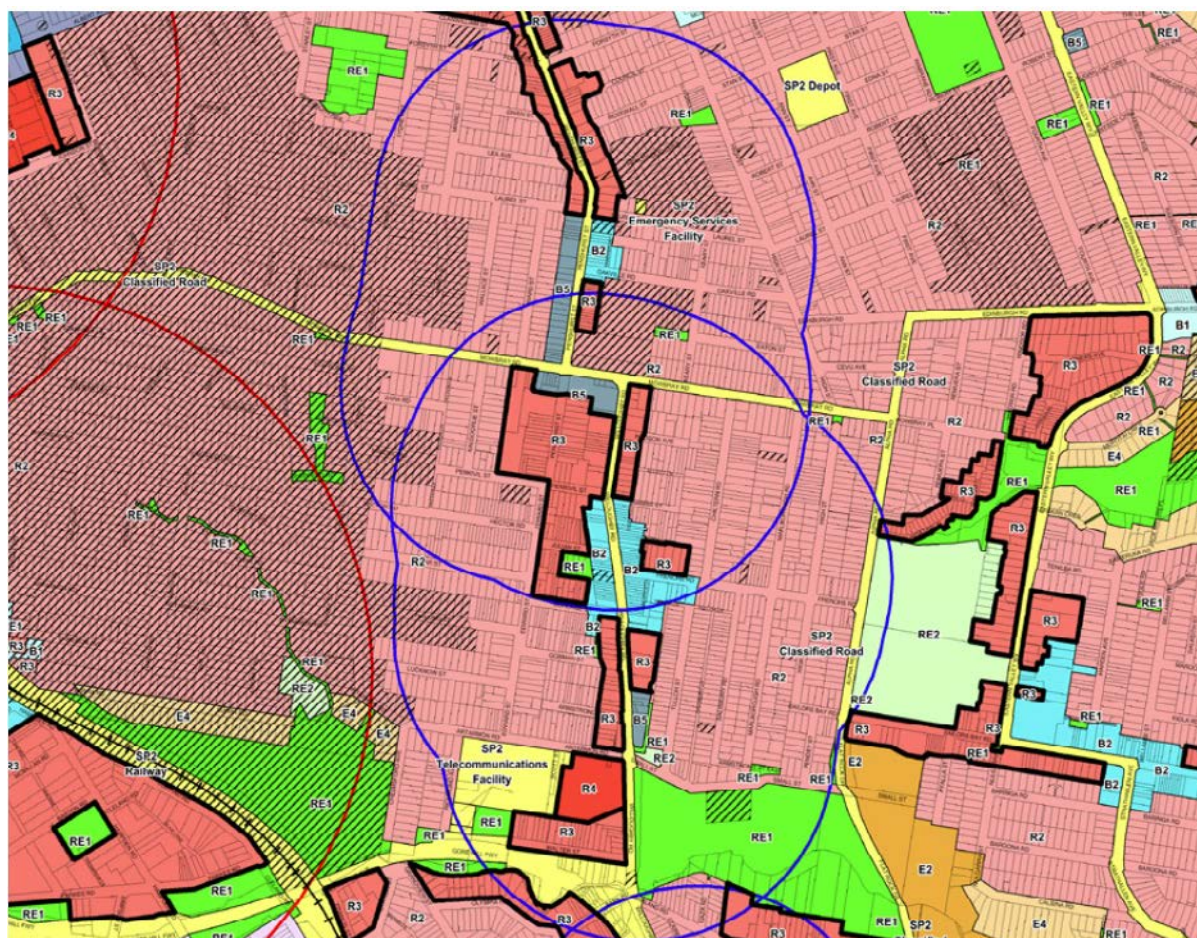


Figure 27 - Catchment area outlined in blue

Source: Willoughby Housing Position Statement for Discussion

6.2 Statutory Planning Matters

6.2.1 Environmental Planning and Assessment Act 1979

Part 3A

The Concept Plan for the Site was approved under Part 3A of the EP&A Act with delegation from the (then) Minister for Planning. Part 3A of the EP&A Act was repealed in March 2011, however, transitional provisions were enacted that provide for continuity in the assessment of Part 3A projects, including for modifications, under Schedule 6A of the EP&A Act.

The modification of an approved Concept Plan by an incoming developer is a normal process which has substantial precedent in NSW. Master plans for major urban development projects obtained by the original landowner, such as Central Park (former Carlton United Breweries site), the Channel 7 Site (Epping), Putney Hill (Royal Rehabilitation Centre site), Kirrawee Brickpit, and Clemton Park (former Sunbeam factory) all evolved significantly following the purchase of these sites by residential developers. In each case, the amended master plan resulted in a significantly superior design, development, planning and community outcomes compared to the original plan.

Recognising that complex urban development projects do change as time progresses, urban conditions change and new parties become involved, Section 75W of the EP&A Act permits a versatile approach in the modification of approvals under Part 3A that facilitates this type of modification to the master plan for the Site.

The project, as it is proposed to be modified, continues to be for the residential redevelopment of the Site with some small-scale non-residential uses and does not fundamentally change the essential nature of the project. Notwithstanding the proposed increase in the number of dwellings and maximum height of buildings, the project does not give rise to any new environmental assessment issues when compared to the environmental assessment for the Concept Plan Approval.

Whilst this modification application seeks approval for a range of changes to the Concept Plan Approval including to the layout of buildings, an increase in dwellings, and the height of three buildings, any impacts associated with the proposed modification will have limited environmental consequences beyond those which were the subject of the original environmental assessment for the Concept Plan Approval (see *Barrick Australia Ltd v Williams* [2009] NSWCA 275). In fact, the amended master plan results in a number of improvements to the key measures considered during the original planning assessment. As such, this modification application is able to be properly considered pursuant to S75W. Furthermore, this modification application will be subject to a thorough environmental assessment, community input, and independent determination as was the original Concept Plan application.

Future Assessment Framework

Under the transitional Part 3A provisions contained in Schedule 6A of the EP&A Act, development which is covered by a Concept Plan approved under Part 3A but is subject to assessment under Part 4:

- is taken to be development which may be carried out with consent under Part 4, despite anything to the contrary in an environmental planning instrument;
- must be consistent with any development standard within the terms of the Concept Plan approval;

- must be generally consistent with the terms of approval for the Concept Plan;
- the provisions of any environmental planning instrument or development control plan do not have effect to the extent of any inconsistency with the approved Concept Plan.

All applications for the residential development of the site will be assessed under Part 4 by Willoughby City Council, in accordance with the development parameters established under the Concept Plan as they are proposed to be amended.

6.2.2 Willoughby Local Environmental Plan 2012 and Willoughby Development Control Plan 2012

There have been no substantive changes to the local planning framework within the immediate locality of the Site since the Concept Plan Approval. The Willoughby Local Environmental Plan 2012 (Willoughby LEP) was introduced during the previous assessment phase for the Concept Plan, and has not been subsequently amended to reflect the approved master plan. The Site continues to be zoned SP2 Infrastructure (Telecommunications Facility), and the Willoughby LEP provides for a lower floor space ratio on the Site than on neighbouring properties at Castle Vale and along Walter Street.

Willoughby LEP rezoned the low-density residential properties along the northern side of Walter Street from a low density zoning to R3 Medium Density Residential and increased the maximum building height control to permit development up to 12 metres in height. A Development Application for the development of the site immediately to the south-east of the Castle Vale site for a residential flat building was submitted to Council in early-2016. Feedback during former community engagement processes indicated that there have been some recent interest in the redevelopment of other properties along Walter Street to reflect the higher-density planning controls. In light of this, consideration should be given to the fact that Walter Street is unlikely to retain its present low density residential character in the medium term.

The master plan has been designed with regard to the provisions of the Willoughby Development Control Plan 2012 (the DCP), in particular:

- residential and visitor parking rates are consistent with the provisions of the DCP for residential flat buildings;
- street setbacks to Artarmon Road and Richmond Avenue have been provided in accordance with the requirements of the DCP;
- solar access to surrounding residential dwellings on Walter Street has been assessed in accordance with the provisions of the DCP to ensure that all dwellings receive solar access in excess of Council's requirements; and
- the reference design has had regard for the DCP requirement that 50% of all apartments be designed and constructed as adaptable dwellings as confirmed in Section 3.33 of the Urban Design Report.

6.2.3 State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development

The CHROFI Master Plan Report addresses the principles and key provisions of the SEPP 65 and the Apartment Design Guide (ADG). Whilst detailed assessment of compliance with the ADG will be undertaken as part of the assessment of future detailed Development Applications by Willoughby City Council, the CHROFI report includes an assessment of the amended master plan against the design principles and demonstrates the ability of future development within the proposed building envelopes to comply with the relevant criteria. In view of this, it is noted that:

- At least 2 hours of sunlight is achieved to 77.58% of all apartments on 21 June under the CHROFI reference design, indicating that the proposed building envelopes are capable of achieving a highly satisfactory solar access;
- 64.04% of apartments could be naturally cross-ventilated under the CHROFI reference design, indicating that the final development at detailed DA stage is capable of complying;
- Only 13.75% of apartments under the CHROFI reference design are single-aspect south-facing apartments, demonstrating that the final development at detailed DA stage is capable of complying with the provisions of the ADG. Furthermore, it is noted that high-quality district and regional views are available to the south of the Site, substantially increasing the potential amenity of south-facing apartments within future buildings; and
- The proposed building envelopes comply with the habitable-to-habitable building separation distances under the ADG for all building envelopes, with the exception of the separation between Buildings A and C/D and between Buildings B and E/F, where habitable-to-habitable interface would not be achieved without additional visual privacy measures. This is considered to be acceptable given that these distances represent the maximum possible building envelopes (which are generally refined at DA stage), affect only a small number of potential apartments and can be readily resolved prior to the Development Application stage through detailed design measures. Detailed envelope plans identifying building separation is provided at Drawing A-S75W-402 in the CHROFI Urban Design Report.

In response to Modification No. 1, the Department and AU+C and Architectus queried the design approach for the proposed 'sunken courtyards' addressing Artarmon Road, particularly regarding impacts on apartment amenity and on the existing streetscape character of the wider area.

These sunken courtyards were proposed in key locations to reduce the visible bulk of buildings and to help reduce the level change across the Site. The use of these courtyards can be seen in the immediate locality at 1A Artarmon Road, whereby courtyards have been provided between the boundary street wall and façade (refer to **Figure 26**). The use of low street walls and planting adjacent to the footpath are adopted measures to safeguard privacy.

CHROFI confirms that the relevant ground level apartments enjoy a 6m deep courtyard and good winter solar amenity. An appropriate edge treatment along Artarmon Rd including a low level wall and planting keeps pedestrians away from the boundary to help minimise overlooking, which is enhanced by the 30m wide building separation for Artarmon Road.

As such, the amended master plan is considered to be consistent with the key SEPP 65 principles and key provisions of the ADG, and will ensure that individual buildings can achieve a high level of residential amenity following detailed design. The CHROFI Master Plan report addresses the achievement of the SEPP 65 design principles in further detail.



Figure 28 - Local example of sunken courtyards

Source: CHROFI

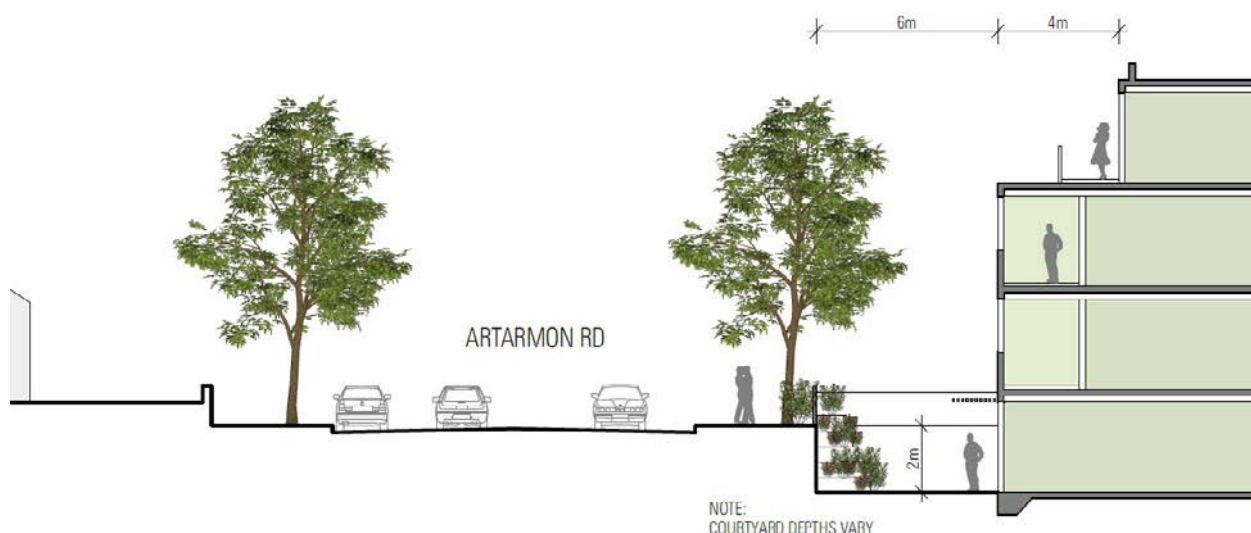


Figure 29 - 'Sunken Courtyard' interface with Artarmon Road

Source: CHROFI

6.2.4 State Environmental Planning Policy No.19 – Bushland in Urban Areas

State Environmental Planning Policy No.19 – Bushland in Urban Areas (SEPP 19) seeks to protect remnant bushland for a range of ecological, aesthetic and recreational objectives. Historical aerial imagery³ shows that the Site was almost entirely cleared for grazing prior to the commencement of use for the Nine studios. Similarly, the (now) Walter Street Reserve was also devoid of vegetation in association with this land use. Existing vegetation on the Site is not a remainder of previous natural vegetation on the Site, and is not representative of the structure of natural vegetation due to the extensive existing development of the Site. As such, SEPP 19 is not considered to apply to the Site.

In any case, as discussed as **Section 5.2** and **6.6**, the proposed Landscape Concept Plan prepared by McGregor Coxall includes a substantial landscaping plan for the Site using species from Council's

³ For example, the 1943 aerial photography made available by NSW Land and Property Information at <http://maps.six.nsw.gov.au/>

native species list. In addition, the VPA proposes a contribution of \$1 million to Council to facilitate bushland regeneration and access improvements within the Walter Street Reserve, which is currently weed-infested. This will be required to be in accordance with the existing plan of management for this reserve, or under a new plan of management developed by Council in consultation with the community and the Proponent. As such, it is considered that the proposal is consistent with the aims of SEPP 19.

6.3 Design Excellence

It has been broadly acknowledged through the community and stakeholder consultation process that, putting aside questions of height and density, the CHROFI master plan that has emerged from the voluntary design excellence process represents a substantially better urban design outcome for the Site. This outcome could not have been achieved through the building-specific design excellence conditions of the approved Concept Plan.

As outlined in **Section 3.3** of this report, a voluntary competitive design excellence process was undertaken by the Proponent to ensure the best possible master plan outcome for the site. The improved masterplan provides for significant public benefits, including a substantial increase in public open space, increased pedestrian permeability, reductions in overshadowing and an improved street configuration. This process was not required by the original Concept Plan Approval.

Council obtained urban design advice from two leading design practices in Sydney – Allen Jack + Cottier (which was included with Council's submission to Modification No. 1) and Architectus (which was not included or disclosed in Council's submission – see **Appendix E**). Whilst each advice included some recommendations for further improvement or a need for additional design resolution at the detailed design stage, the overall nature of the advice was of broad support for the CHROFI master plan. Some selected quotations from these assessments demonstrating the improved design quality of the master plan are included below:

Architectus:

"It is a very skilful design... Generally the modification is a vast improvement on the approved scheme in terms of layout, interface with surroundings and open space connectivity... The fact is that the additional height of 9, 11 and 12 is modest and away from view of surrounding neighbours due to the size of the site."

NSW Government Architect's Office

"Many aspects of the Concept Plan provide improved outcomes for the site and surrounding local area and the design has addressed many of the comments raised previously by GAO... The additional height positioned centrally within the site in the form of two narrow footprint towers works well to ameliorate impacts on the surrounding existing residential areas."

Allen Jack + Cottier

The overall site strategy and public benefit created by it in the proposed amendment is a commendable improvement on the approved concept plan... The proposed concept plan employs a number of strategies to mitigate the perceived impacts of the additional height that we commend.

It is evident that the revised design under Modification No. 1 would result in a significant improvement in terms of the urban design outcome for the Site. The overall design intents under this previous application have been retained in the proposed scheme and as such reasonably continue to apply.

Design excellence in the detailed building design (DA phase) is already provided for as part of Conditions 1 and 2 of Schedule 3 of the Concept Plan Instrument of Approval. This is a separate design process from the one already undertaken by the Proponent in progressing improvements to the broader urban structure proposed in the CHROFI master plan.

It is noted that the proposed increase in density on the site is not solely justified by the contribution of design excellence, however, there are a number of benefits of the proposal in addition to design excellence which must be considered including:

- \$1 million contribution toward the upgrade of the Walter Street Reserve or another proximate open space area;
- \$500,000 contribution toward the future upgrade of the Willoughby Road intersection, or other proximate works to improve the functioning of the local traffic network; and
- Increased affordable housing contribution of 5% for additional gross floor area sought as part of this modification application.

These are also considered to be public benefits which are independent of the design excellence process and which are supported by the additional development sought as part of this Modification Application.

Overall, the voluntary design excellence process undertaken by the Proponent has led to an urban design outcome that provides a better urban environment for the future and existing local communities, creates higher residential amenity, reduces environmental impacts on surrounding properties and provides additional new open space that will be accessible to the surrounding community. The amended master plan represents a superior outcome in comparison to the existing approval, and should be supported. A detailed discussion of the merits and likely impacts of the proposal is included in the following sections.

6.4 Built Form and Urban Design

The following sections assess the key aspects of the built form and urban design and the comparative environmental impacts between the approved master plan and the amended CHROFI master plan sought under this application.

6.4.1 Urban Design Composition

Considerable attention has been paid to create a built form and massing that compliments the local and district context, and results in reduced impacts for the community. The Site is unique by virtue of its size, location and context. As a large consolidated site of nearly 3 hectares, it is well suited to accommodate additional building height with strong urban design without resulting in additional impacts on the surrounding area. It will deliver slender and elegant buildings in the centre of the site whilst presenting as sensitive low edge buildings to each street.

In the approved scheme, three of the buildings are eight storeys tall with wide 24m building footprints, located particularly close to the southern boundary and highly visible from Artarmon

Road and the east. The squat proportions of these buildings, arising from the series of compromises in the original Concept Plan Approval, results in a massing that appears bulky and stout, and overall the building arrangement creates a convoluted tangle of built form which offers limited visual breaks to see either sky or the public green spaces.

At the ground plane, the large approved building envelopes and absence of clearly navigable corridors throughout the Site create a lack of legibility and allow building mass to dominate views into, through, and within the Site. By creating a strongly aligned grid of buildings in the modification, the ground plane is more readily navigable for both the general public and future residents and more likely to be utilised. The strong north-south spines along the central public space and the new Scott Street create clear views to the new open space opportunity at the southern edge of the Site as well as opening up important district views to Naremburn and St Leonards.

CHROFI worked with the existing site falls and a logical building arrangement which locates height deep into the site. Buildings along the street are pushed below street level to reduce visible bulk, whilst the remaining buildings step down into the site to reduce overall building heights. The three highest proposed buildings are up to 9, 11 and 12 storeys which crest across the hilltop, stepping down in height to Castle Vale in the east and Richmond Ave in the west as illustrated in **Figure 30**.

By sinking the buildings down into the site, the additional height is at most 9.1m above the maximum approved RLs. As illustrated in **Figure 31** the overall proposed increase in building height in comparison to the approved 8-storey buildings is only 9.1 metres for Building E and only 6 metres for Building D⁴.

The area of the building with additional heights are small in footprint, helping to create a slender, elegant proportion to the buildings. The position of this height is moved away from the southern boundary, helping to create public open space on the southern boundary, and reducing overshadowing impact on Walter St residents. Despite the additional height, the impact is less overshadowing, more slender refined forms when viewed from the surrounding context and more land for the public domain.

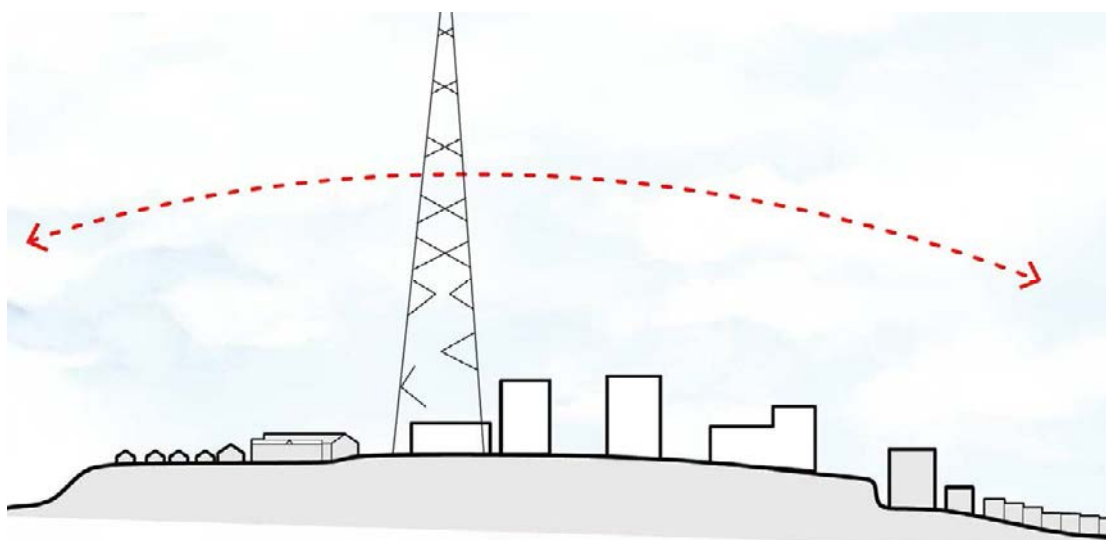


Figure 30 - Cresting of building form across the site and to surrounding areas

Source: CHROFI

⁴ Note that the current Concept Plan Approval building envelopes do not make allowance for any rooftop plant equipment or lift overruns. The CHROFI master plan makes allowances for these in the proposed building envelope plan to more accurately reflect the overall building height. For the purpose of a direct comparison, 500mm has been added to the approved building envelopes as a very conservative allowance



Figure 31 - Comparison of existing, approved and proposed building heights (tallest three buildings)

Source: CHROFI

6.4.2 Interface, Transitions and Visual Privacy

The following sections provide an assessment of the interface of the proposed building envelopes to key existing site interfaces.

Richmond Avenue

Richmond Avenue is a local road with minimal road traffic and a low density scale. As can be seen in **Figure 32**, the approved street wall height to Richmond Avenue is higher than proposed under the amended master plan, which sets the upper level back from the street in order to reduce visual bulk. In addition, the relocation of the internal loop road and the heavy articulation of the western elevation of future buildings along this street will produce a less repetitive street frontage with less visual dominance (see **Figure 33**).

The separation distance between existing dwellings along Richmond Avenue and new dwellings would be approximately 30 metres, and combined with the retention of existing mature trees along this street, it is expected that the proposed amendments will result in a neutral or beneficial outcome for this transition interface compared to the approved Concept Plan.

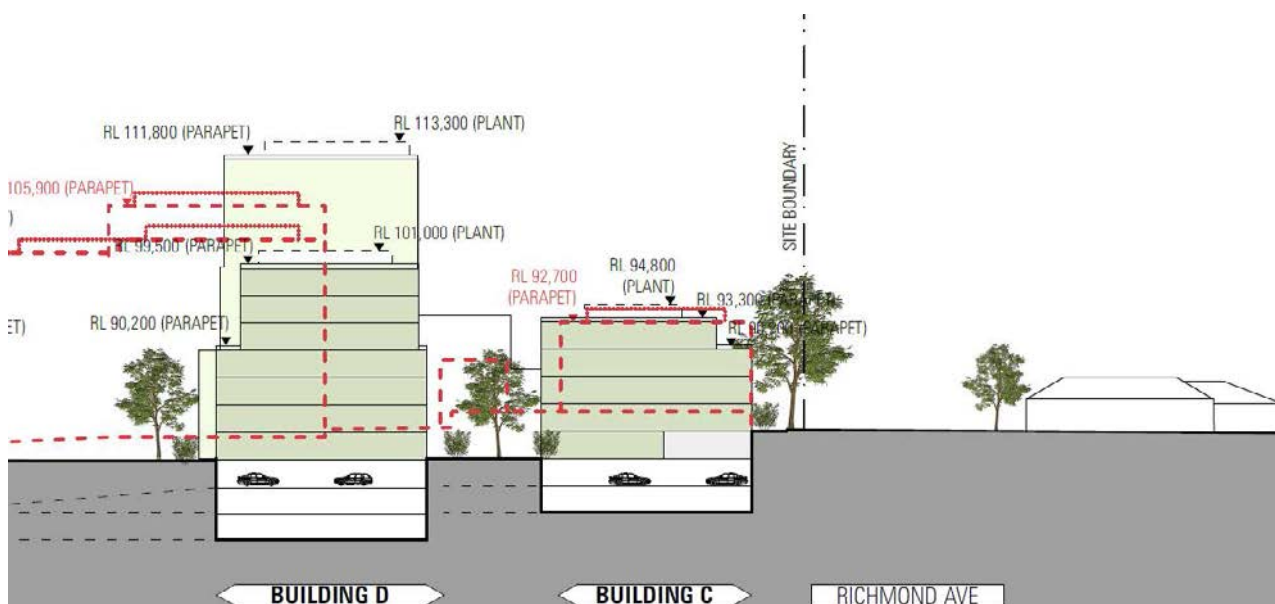


Figure 32 - Section illustrating approved and proposed envelopes to Richmond Avenue

Source: CHROFI



Figure 33 - Indicative photomontage illustrating approved (left) and proposed (right) envelopes

Source: CHROFI

Artarmon Road

Artarmon Road is a local thoroughfare between Chatswood, Artarmon and Willoughby to Willoughby Road and eastern areas of the LGA. The street falls from the west to the east, with some properties on the northern side of the street being set several metres above the street level behind a notable retaining wall. As with the Richmond Avenue interface, the CHROFI master plan proposes a lower-scale street edge that utilises a lower ground floor level and a heavily recessed upper level to present to the street as a 2-3 storey building (**Figure 34**).

Whilst the re-alignment of the public open space to a north-south axis reduces the physical separation between existing dwellings and new buildings at the corner of Artarmon Road and Richmond Avenue, it is considered that the new street edge building will in fact provide a more appropriate transitional scale than the Concept Plan Approval. Under the Concept Plan Approval, dwellings on Artarmon Road between Richmond Avenue and Edward Street look across the street and the narrow approved park directly onto a very wide six storey apartment building. The amended scheme reduces this separation, but the new buildings present as only two to three storeys in height and acts as a visual shield to taller buildings behind.

As illustrated in **Figure 35**, the proposed development presents to Artarmon Road in a highly sensitive manner that is appropriate for a low density interface, particularly in light of the taller street buildings within the Castle Vale development immediately to the east of the Site.

Separation distance between proposed and existing dwellings would be some 30 metres, which is more than double the habitable-to-habitable separation distances recommended under the ADG to ensure a suitable level of visual privacy and scale transition.

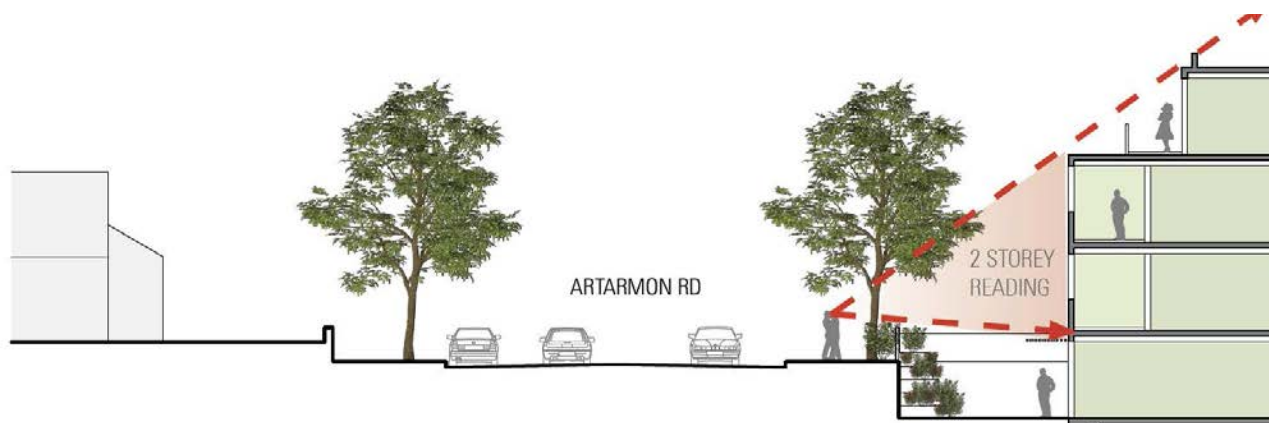


Figure 34 - Section illustrating approved and proposed envelopes to Artarmon Road

Source: CHROFI



Figure 35 - Indicative photomontage of proposal fronting Artarmon Road

Source: CHROFI and Ivolve

Castle Vale

The Castle Vale development is an existing residential apartment development with residential flat buildings that scale up in height from Willoughby Road towards the common property boundary with the Site.

Similar to the Concept Approval, the amended master plan does not propose any building envelopes on the eastern side of Scott Street adjacent to Castle Vale. The scheme generally retains the significant separation distance between these developments and the general height profile of eight storeys. Whilst the easternmost component of Building F will reach nine storeys in height, the remaining components of Building F and Building G have been reduced to between four to seven storeys or remain consistent at eight storeys, providing for an overall reduced visual interface and increased solar access. As a result, the proposed Buildings G and F will appropriately transition from the Artarmon Road frontage and interface with the Castle Vale site, with a reduced overshadowing impact as detailed in **Section 6.4.3**.

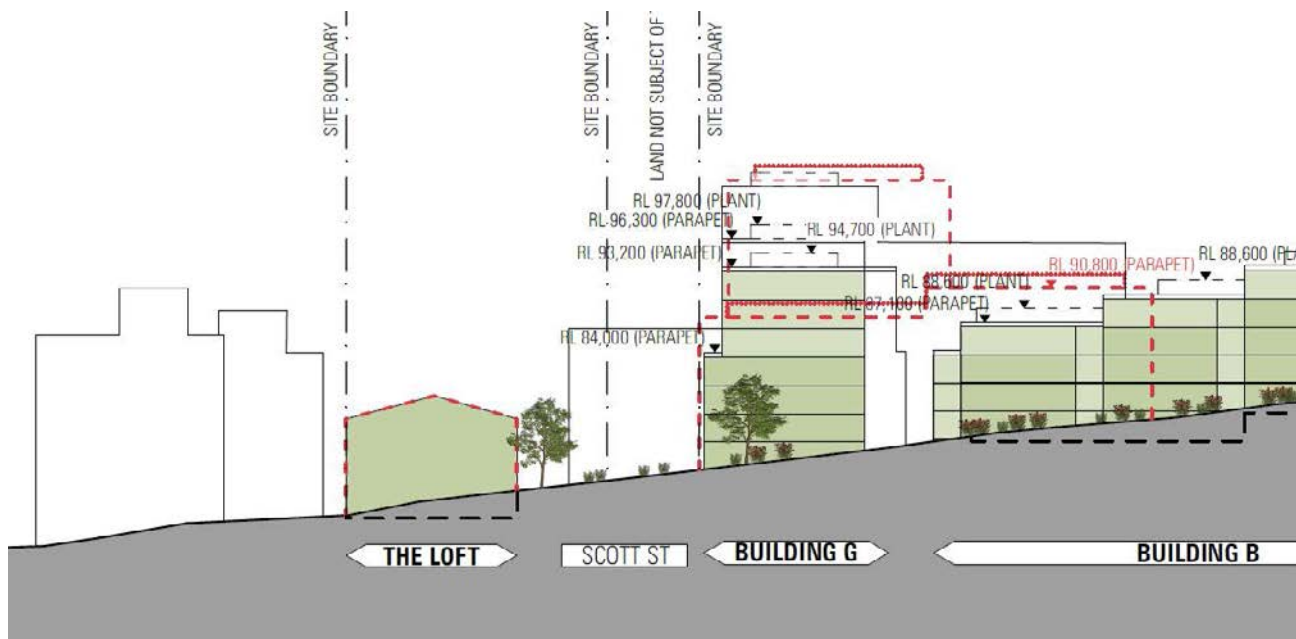


Figure 36 - Section illustrating approved and proposed envelopes to Castle Vale (approved dotted in red and proposed filled green).

Source: CHROFI

Walter Street

Figure 37 below illustrates a substantial reduction proposed to the extent of building envelope located along the southern site boundary which interfaces with the Walter Street dwellings. Overall, the length of building adjacent to the southern property boundary is reduced from approximately 155 metres under the approved master plan to approximately 100 metres under the amended master plan. **Figure 38** illustrates that whilst the tallest proposed building within the Site will be partially visible from Walter Street, there will be substantially greater articulation and separation of buildings when viewed from the south. This will provide residents in the backyards of the existing Walter Street properties with a greater sense of openness in comparison to the bulkier approved buildings along the southern boundary. The proposed 'bush building' (Building J) in the south-eastern corner of the site will be heavily sculpted in accordance with the master plan design intent, with a materials palette selected to be recessive in the landscape and blend into the landscaped character of the escarpment.

As noted in **Section 6.2.2**, the properties on Walter Street adjoining the Site were rezoned for medium density residential development up to four storeys in height under LEP 2012, which came into force after the exhibition of the original Concept Plan application. As such, the character of this transitional zone is likely to change significantly over the medium term as these properties are redeveloped.

Building J will be separated from existing Walter Street properties by between 30 and 40 metres, which is more than double the building separation required under the ADG to ensure visual privacy. The future Development Application for this building will need to demonstrate that appropriate design measures are included to ensure satisfactory privacy, through measures such as unit orientation and solid balconies to reduce direct views. It is noted that as outlined above, it is quite possible that the existing dwellings in Walter Street will have been redeveloped by the time that Building J is delivered and as such these considerations may be different or irrelevant.

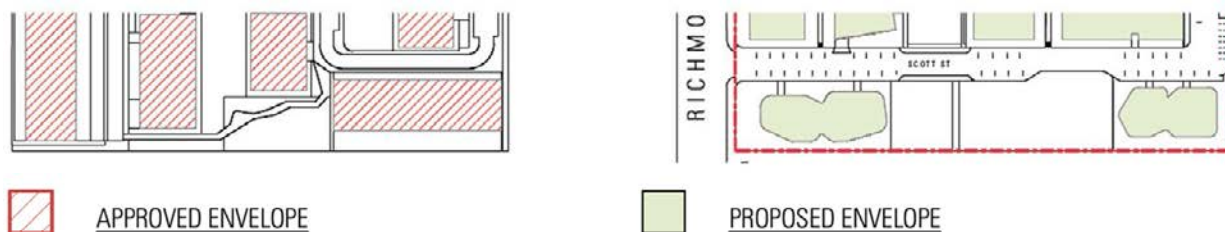


Figure 37 - Comparison of the southern boundary interface and building footprints

Source: CHROFI



Figure 38 - Indicative photomontage of approved (left) and proposed (right) building envelopes viewed from Walter Street (looking west)

Source CHROFI and Ivolve

Scott Street Road Reserve

The removal of Scott Street from the land to which the Concept Plan applies will not result in any direct impact upon the built form relationship between the proposed maximum building envelopes and the streetscape. The Scott Street vehicular carriageway is currently setback approximately five metres from the edge of the road reserve (western gutter to property boundary), with a generous landscaped verge and pedestrian footpath along the western edge of the road reserve adjacent to the proposed Buildings E and G. This is reflected in the CHROFI master plan drawings, which show Scott Street being retained in its current alignment.

The Concept Plan provides flexibility to allow for upgrades to landscaping, kerb/guttering, on-street car parking and the carriageway as part of future Development Applications for the site in accordance with the provisions of section 138 of the *Roads Act 1993*.

The setback of the proposed maximum building envelope to the Scott Street road reserve is considered to be acceptable as:

- There is an existing landscaped verge and footpath which provides a suitable separation between future buildings and the roadway;
- Scott Street is a local road which provides access only to the subject site, and accordingly there are no established setbacks on adjoining sites that would require a greater setback;

- Due to the fact that Scott Street provides access only to the subject site and is not part of an established suburban street, it is appropriate for this road to have a similar urban design characteristic to the internal roads proposed within the site; and
- The proposed Concept plan building envelopes are maximum envelopes, and future Development Applications may provide greater setbacks to the road reserve or increased building articulation if required from an architectural perspective.

In light of the above, the proposed interface between the site and the Scott Street road reserve is considered to be acceptable and appropriate given the existing and proposed future role of this road within the immediate local context.

6.4.3 Overshadowing

The development of the CHROFI master plan has from the outset been guided by two key principles:

- Ensuring that the proposed master plan does not result in a net worsening of solar access for adjoining properties in comparison to the approved Concept Plan; and
- Ensuring that all existing dwelling houses and apartments achieve a level of solar access that complies with the applicable provisions of the Willoughby DCP and the ADG respectively, except where this is not currently achieved due to existing topographical conditions⁵.

Detailed shadow modelling for the proposed building envelopes has been undertaken at 1-hour intervals between 9am and 3pm for the winter solstice, equinoxes and summer solstice in order to support a comprehensive analysis of the comparative overshadowing impact of the amended master plan (Appendix 1 to the CHROFI Master Plan Report).

Detailed overshadowing diagrams are provided in the Master Plan Report, however, due to the scale of the site, the number of approved and proposed buildings and the complexity of the existing landform, a numerical comparison of the modelling results for approved and amended master plans provides for the most accurate and objective assessment of overall overshadowing impacts.

Walter Street

Existing Dwelling Houses

Figure 39 below provides a summary of the solar access to each of the potentially affected dwelling houses located on Walter Street. The Willoughby DCP 2012 requires that private open space and dwellings receive a minimum of three hours of direct sunlight to both the main living room and principal private open space⁶. This table outlines the number of hours (measured at 15 minute intervals) of direct sunlight received to the dwelling's rear façade and private open space at 21 June (winter solstice), presenting a worst-case analysis of overshadowing which would be substantially reduced at other times of the year. For these dwellings, the solar calculations indicate the following outcomes in comparison to the approved Concept Plan:

- 5 of the dwellings and 3 private open space areas would receive more direct sunlight under the amended scheme;

⁵ Existing dwellings at 27A, 27B, 29A, 29B and 31 Walter Street currently receive less than 3 hours of direct sunlight due to existing topographical conditions, and therefore currently do not achieve DCP compliance irrespective of approved and future development.

⁶ As it is not possible to determine the location of living areas within each private dwelling, which may not be located to the rear of each property, CHROFI's methodology adopts a measure of the rear (northern) façade of each dwelling for the purpose of this assessment. A detailed description of the solar modelling methodology is contained in Appendix 1 of the Master Plan Report.

- 3 of the dwellings and 4 private open space areas would receive the same amount of direct sunlight under the amended scheme;
- whilst 1 dwelling would receive 15 minutes less direct sunlight and 1 dwelling would receive 30 minutes less direct sunlight, these dwellings would still substantially exceed the DCP requirement of 3 hours, with each of these dwellings received at least 5 hours of direct sunlight;
- whilst 3 dwellings would receive between 15 minutes to 1 hour less sunlight to private open space areas, all of these dwellings would still exceed the DCP requirement of 3 hours, with each of these spaces continuing to receive at least 4¼ hours of direct sun; and
- whilst 3 dwellings will continue to be non-compliant with solar access to private opens space areas, there has been no change to the approved scheme with respect to overshadowing these areas, and all remaining 10 dwellings will comply with the minimum DCP requirements under the amended scheme; and
- there is a net improvement in direct sunlight hours received in aggregate by both the principle private opens spaces and rear facades of affected dwellings under the amended scheme in comparison to the approved concept plan.

In light of the above, it can be surmised that the amended scheme provides a lesser overshadowing impact compared to the approved Concept Plan as:

- Aggregate solar access to the 10 affected dwellings is improved for both facades and private open space;
- The majority of affected dwellings either have reduced overshadowing or do not lose any sunlight under the amended scheme for both rear facades and private open space; and
- Where there is additional overshadowing to an individual dwelling, the affected dwelling will still receive a minimum of 3 hours of direct sunlight in accordance with Council's DCP.

ST NO.	REAR FAÇADE (HOURS)		REAR PRIVATE OPEN SPACE (HOURS)	
	APPROVED	RTS SCHEME	APPROVED	RTS SCHEME
31	4.25	5	2	3.25
29A	3.5	4.25	0	0
29B	4	4.25	0.25	0.75
27A	3.25	3.5	0	0
27B	3.5	3.75	0	0
25	5.75	5.75	5.75	4.75
23	6	6	4.25	4.25
21	6	6	5.5	6
19	5.25	5	4.75	4.25
17	6	5.5	6	5.5
47.5		49	28.5	28.75
		+ 1 hr 30mins		+ 15mins

Figure 39 - Calculations of solar access to Walter Street dwellings at 22 June

Source: CHROFI

Future Development

Properties along the northern side of Walter Street have been zoned R3 Medium Density Residential since the commencement of the Willoughby LEP in 2012. This zone allows for residential flat buildings (among other things), with a maximum FSR of 0.9:1 and a maximum building height of 12 metres. Since the public exhibition of Modification No.1, there have been five separate Development Applications lodged with Willoughby City Council in relation to these properties as summarised in **Table 10** and **Figure 40**.

At the time of this report, all but one of the Walter Street DAs are under assessment and have not been determined by Council, with the exception of an approved development at 5-9 Walter Street. There appears to be a number of assessment issues still requiring resolution for those developments awaiting determination, including potential site isolation. As such, it is not possible or appropriate to treat these development proposals as a definitive guide for the future development pattern adjacent to the subject site. They do, however, provide an indication of the future development character of this street and interface with the subject site. This interface is expected to be significantly different from the existing situation.

DA documentation associated with the proposed development closest to the subject site, DA 2016/452 for 21-27 Walter Street, includes an assessment of that project against the exhibited Modification Application. Key findings include:

- The Design Verification Statement states that 79.3% of proposed apartments will receive at least two hours of direct sunlight at mid-winter, which is in excess of ADG requirements⁷.
- Overshadowing calculations have taken into account the proposed Building U envelope as public exhibited⁸. Therefore, it is not considered that the proposed development would give rise to any unacceptable impacts on future development potential along Walter Street with regard to overshadowing.

⁷ Design Verification Statement, Architecture Urbaneia, 7 November 2016.

⁸ Shadow Study, Mid-winter, Architecture Urbaneia, 7 November 2016.

- Architectural drawings provided with the DA indicate that there would be a minimum physical separation between Building J and the proposed development of approximately 33 metres, which is in excess of the 12 metre habitable-to-habitable separation distance required under the Apartment Design Guide.

In light of the above, it is evident that the Modification Application will not adversely impact upon the amenity of potential future residential apartment buildings along Walter Street in the vicinity of the subject site.

Figures 41 to 44 illustrate the five development proposals currently being assessed by Council.

Table 10- Summary of current development proposals for Walter Street properties

Ref	Figure	Address	Status	Development	FSR	Height
2016/263	1	1-1A Walter Street & 452-460 Willoughby Road	Refused – Subject to LEC Proceedings	225-place child care centre	0.6:1	12.16 metres
2016/210	2	5-9 Walter Street	Approved	29 apartments	0.99:1	14.2 metres
2016/303	3	11-13A Walter Street	Approved	24 apartments	0.99:1	12.75 metres
2016/532	4	15-17 Walter Street	Approved	23 apartments	0.88:1	14.08 metres
2016/452	5	21-27 Walter Street	Approved	29 apartments	0.94:1	14.8 metres



Figure 40 - Summary of development proposals along Walter Street (refer Table 10)

Aerial imagery: Nearmap



Figure 41 - Rendering of proposed development at 1-1A Walter St and 450-460 Willoughby Rd

Source: ArtMade Architects



Figure 42 - Rendering of proposed development at 11-13A Walter St

Source: Architecture Urbaneia



Figure 43 - Rendering of proposed development at 15-17 Walter St

Source: CSquared Architects



Figure 44 - Rendering of proposed development at 21-27 Walter St

Source: Architecture Urbaneia

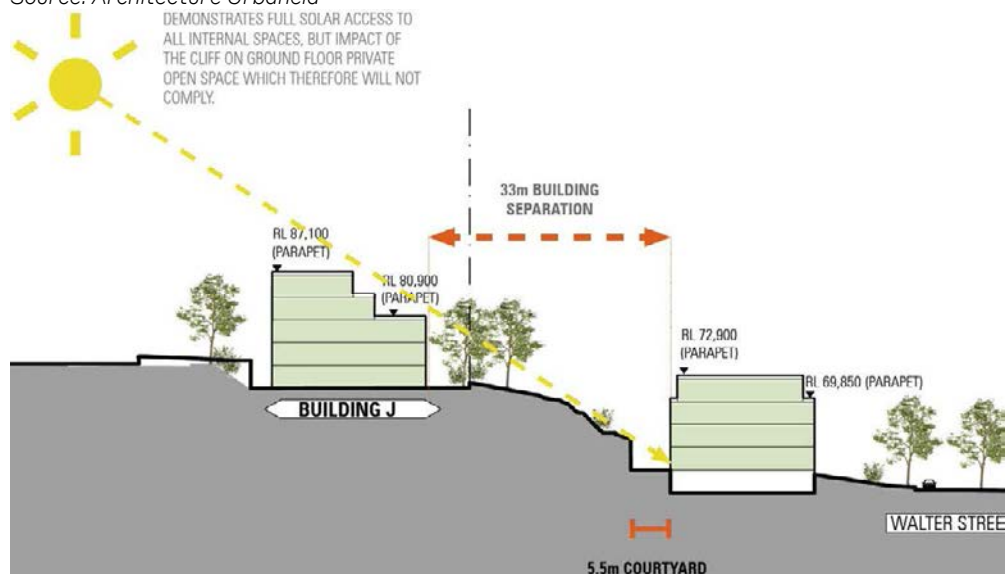


Figure 45 - Interface between Building J and potential 21-27 Walter St

Source: CHROFI

Castle Vale Residential Flat Buildings

The modification does not propose any building envelopes on the eastern side of Scott Street adjacent to Castle Vale, commensurate with the Concept Approval. The scheme generally retains the significant separation distance between these developments and the general height profile of eight storeys. **Figure 46** below indicates the number of apartments that are overshadowed during each 15-minute interval between 1pm and 3pm on 21 June.

As a result of overshadowing from the approved Concept Plan, 18 apartments within the Castle Vale development would be affected by some degree of overshadowing and 4 apartments would receive less than the two hours of direct sunlight as the recommended standard under the ADG on 21 June (winter solstice). In the amended CHROFI scheme, only 15 apartments would be affected by some degree of overshadowing and only 2 apartments receive less than two hours of direct sunlight.

Accordingly, the length of time that apartments are overshadowed has been reduced by 3 hours, 3 more apartments will be unaffected by the development, and 2 additional apartments will now receive at least two hours of direct sunlight. This represents a significant net improvement in the overshadowing impacts as a result of the proposed amendments to the master plan on the Castle Vale buildings.

Furthermore, it is noted that under the ADG it is not necessary for each individual apartment to receive a minimum of two hours of direct sunlight, but rather that 70% of the apartments in a building receive this amount. The existing buildings comply with this requirement under both the approved and amended schemes.

In light of the above, it is clear that:

- there is a net improvement in the overshadowing impacts under the amended scheme compared to the approved Concept Plan;
- 2 additional apartments will now receive at least two hours of direct sunlight compared to the approved Concept Plan; and
- the amended scheme continues to ensure that solar access is provided to each affected building in the Castle Vale site, and will continue to achieve compliance with the solar access design criteria under the Apartment Design Guide (70% of apartments).

BLD #	1-1:15		1:15-1:30		1:30-1:45		1:45-2	
	APPROVED	PROPOSED	APPROVED	PROPOSED	APPROVED	PROPOSED	APPROVED	PROPOSED
Tower A	0	0	0	0	0	0	0	0
Tower B	0	0	0	0	0	0	0	0
Tower C	0	0	0	0	1	0	4	3
TOTAL	0	0	0	0	1	0	4	3

No change	No change	Improvement (+1)	Improvement(+1)
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2-2:15		2:15-2:30		2:30-2:45		2:45-3	
APPROVED	PROPOSED	APPROVED	PROPOSED	APPROVED	PROPOSED	APPROVED	PROPOSED
0	0	1	1	1	1	1	1
0	0	0	1	1	3	2	4
8	6	10	8	12	9	14	10
8	6	11	10	14	13	17	15

Improvement(+2)	Improvement(+1)	Improvement(+1)	Improvement(+2)
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Figure 46 - Measurement of number of existing Castle Vale apartments overshadowed at 15 minute intervals at 21 June

Source: CHROFI

Conclusion - Overshadowing

Overshadowing was one of the major contentions in the assessment of the original Concept Plan application, and was one of the primary reasons for the PAC seeking to reduce the extent and height of building envelopes (and hence the number of approved dwellings) in their final determination. This assessment, and further detailed analysis by CHROFI, demonstrates that notwithstanding the proposed increases to height and density under this modification, the outcome of the amended scheme would be a net improvement in overshadowing impacts in comparison to the currently approved master plan. This outcome has been achieved through intelligent design that has resulted in the careful placement of more slender buildings within the Site in direct awareness of the overshadowing constraints, reflecting the overarching design intent of ensuring overshadowing is improved from the current approval.

6.4.4 Density

This Modification Application seeks to increase the Floor Space Ratio (FSR) on the site from 1.2:1 to 1.5:1. As outlined in the preceding and following sections, the consequential increase in the maximum Gross Floor Area (GFA) proposed does not give rise to any significant adverse environmental impacts, and in fact supports a number of initiatives which reduce the impacts of the Concept Plan. Concerns expressed in public submissions to Modification No. 1 regarding the 'density' of the proposed development generally focused on the number of apartments approved and their potential for external impacts on traffic, parking and social infrastructure, rather than with the physical master plan and arrangement of buildings.

The amended CHROFI master plan positions buildings intelligently within the site and makes use of topographical changes and building set downs to reduce the volume of buildings above existing ground levels within the Site by 11% (**Figure 47**). As such, the appearance of built form density from outside of the Site would be reduced in compared to the approval despite the proposed increase in GFA.

The Site is a large, consolidated land holding that presents a unique opportunity to manage the off-site impacts of higher density development whilst supporting a significant public benefit both through new public open space within the Site and through additional contributions to local infrastructure. These benefits are additional to the existing Concept Plan Approval and therefore require additional density to ensure the feasibility of the project. The proposed density is comparable to or lower than a number of areas within the Willoughby LGA which have similar interfaces to lower-density residential environment:

- Willoughby Road – FSR between 1.5 and 2:1
- Artarmon (west of station) – FSR of 2:1
- Chatswood South (Devonshire St/ Johnson St) – FSR of 1.7:1
- Northbridge – FSR of 2.0 to 2.6:1

It is noted that the adjoining Castle Vale development, which has a maximum FSR of 1:1, was rezoned and constructed in the 1970s. The Castle Vale development was completed around the same time as the extension of the Warringah Freeway to Willoughby Road (1978), and more than a decade before the completion of the Gore Hill Freeway (1992). Given the significant changes in the infrastructure and urban development context of the Site over the intervening four decades, the 1.5:1 FSR proposed for the Site is modest in comparison.

In a broader context, large master planned infill residential sites have achieved densities that are equal to or in excess of that proposed in comparable settings:

- Putney Hill, Ryde – FSR between 1.5 and 2.8
- Union, Balmain – FSR of 1.5
- Clemton Park – FSR between 1.55 and 2.15
- Morton Street, Parramatta – FSR of 1.75
- Arise, Lane Cove (150 Epping Rd, Lane Cove) – FSR of 1.9
- Macquarie Park Village – FSR of 2.28
- Kirrawee Brickpit – FSR of 1.92

In light of the above, it is considered that the proposed increase to density development is compatible with the Site's location and the additional density does not, in and of itself, give rise to any additional environmental impacts.

As demonstrated in this environmental assessment and the accompanying design and technical studies, in many instances the proposed modifications support improvements to key planning performance measures. In light of this, the additional density should be embraced as an opportunity to provide additional housing supply, public amenity and infrastructure improvements on a well-located site.

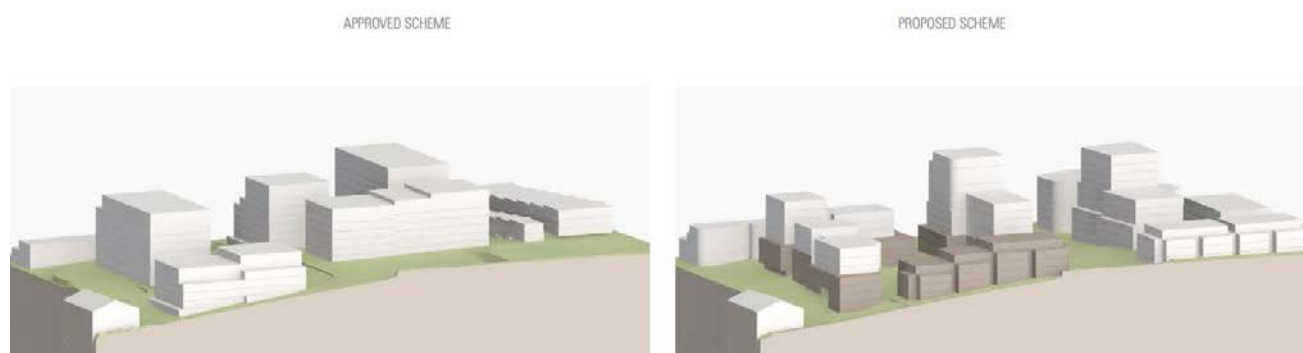


Figure 47 - Comparative assessment of building volume under approved (left) and proposed (right) master plans

Source: CHROFI

6.5 Visual Impact

CHROFI and Ivolve have undertaken a detailed visual assessment to assess the visual impacts of the proposed modifications against the impacts of the approved Concept Plan, which is provided at Appendix 3 of the Master Plan Report. This analysis has adopted the key viewpoints utilised in the assessment of the original Concept Plan for consistency in the assessment process.

Visual impact assessment cannot simply be defined by a comparison of building heights or floor space ratios. The placement of building mass, including the orientation and depth of buildings, relationship between buildings and any changes to site levels all have a significant impact on the perception of the overall building massing. A key design principle in the CHROFI master plan has been to minimise visual impacts and open up potential view corridors through the Site, through the north-south alignment of taller and narrower buildings and the creation of the central spine parkland.

The key central corridor, illustrated in **Figure 48**, along Edward Street is a significant local and district view corridor along the 500 metre direct alignment of this street and from further north along Penshurst Street. Similarly, in views from the south around Naremburn, wide views to the Site present the opportunity to provide a more responsive approach to building envelopes to provide greater separation between buildings and minimise visual impact. Under the approved Concept Plan, the large east-west aligned six storey building provides a bulky mass that blocks these through-site views and increases the perceptible building mass.



Figure 48 - Axis from Edward St to St Leonards (left) and actual view south along Edward St from Penkivil St (right)

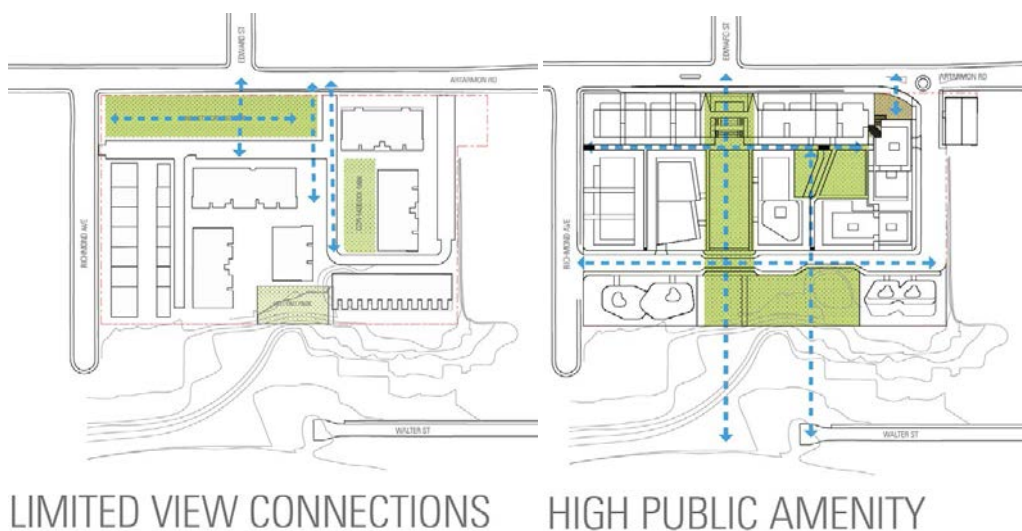


Figure 49 - Key site views and vistas in approved (left) and proposed (right) master plans

Source: CHROFI

6.5.1 Local Views

Figures 50 to 52 below provide a comparative analysis between the visual scale of building envelopes under the approved and amended master plans.

Of greatest note in these comparisons is the significant improvement in the visual impact in the Edward Street view at **Figure 50**, where the realignment of the main public open space results in the street terminating with a district view rather than a long, bulky building. Whilst the taller elements of the proposed envelopes protrude slightly above the existing tree canopies to the sides of the main view axis, these protrusions are minor and are more than offset by the visual benefits of the newly created view corridor.

Figures 51 illustrates the closer streetscape views along Artarmon Road. This view indicates that there will be no significant change in the overall massing of buildings to this streetscape. Additional articulation proposed along the Richmond Avenue will also provide for a reduced visual impact along the length of this street in comparison to the continuous row of approved townhouses. On Artarmon Road, the creation of the new 'Village Square' will break up the massing of the buildings along this street, and as noted in **Section 6.4.1** the sensitive approach to building massing on Artarmon Road will provide a low scale edge that is visually appropriate at the interface to lower-density residential areas.

On Walter Street, the angled view indicates that part of the taller proposed building will be visible from public street views toward the Site. As noted in **Section 6.2.2**, however, the properties along the northern edge of Walter Street have been recently rezoned for medium density residential development, including residential flat buildings. As a result, it is likely that the scale and nature of development on these properties will change substantially over the medium term, either blocking views to development within the Site or substantially altering the context in which this proposed building is perceived. In terms of private views taken from the rear of properties in Walter Street, the amended Concept Plan will offer a net improvement in comparison to the approved Concept Plan by:

- Substantially reducing the footprint of built form in the vicinity of the south-eastern corner of the site and providing a stepped down built form to the southern edge of Building U;
- Preserving much of the southern edge of the Site for publicly accessible open space;
- Narrowing of proposed envelopes for taller building envelopes, and increasing their setback from the southern boundary to reduce visual impact and widen the visible spacing between buildings; and
- Contributing toward the regeneration of the Walter Street Reserve, which is currently weed-infested and unsightly.

In light of the above, it is considered that the amended CHROFI master plan represents a significant improvement to the visual impact of the building envelopes on local views in comparison to the approved Concept Plan.

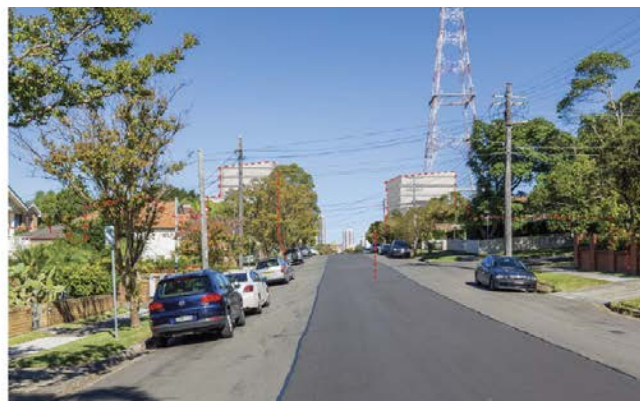


Figure 50 - View 04 - Edward St looking south with approved envelopes (left) and proposed envelopes (right)



Figure 51 - View 05 - Artarmon Road looking west with approved envelopes (left) and proposed envelopes (right)



Figure 52 - View 06 - Walter St looking north west with approved envelopes (left) and proposed envelopes (right)

Source: CHROFI

6.5.2 District and Regional Views

District views to the subject site are currently dominated by the TXA transmission tower which, at 233 metres in height, is one of the tallest structures in Sydney.

The Castle Vale development is also visible within local district views to the north, east and south. Within the broader visual catchment of the Site, district and regional views are positioned in a context of a number of visually prominent developments and centres such as Chatswood (**Figure 53**), Royal North Shore Hospital, St Leonards, North Sydney and the Sydney CBD.

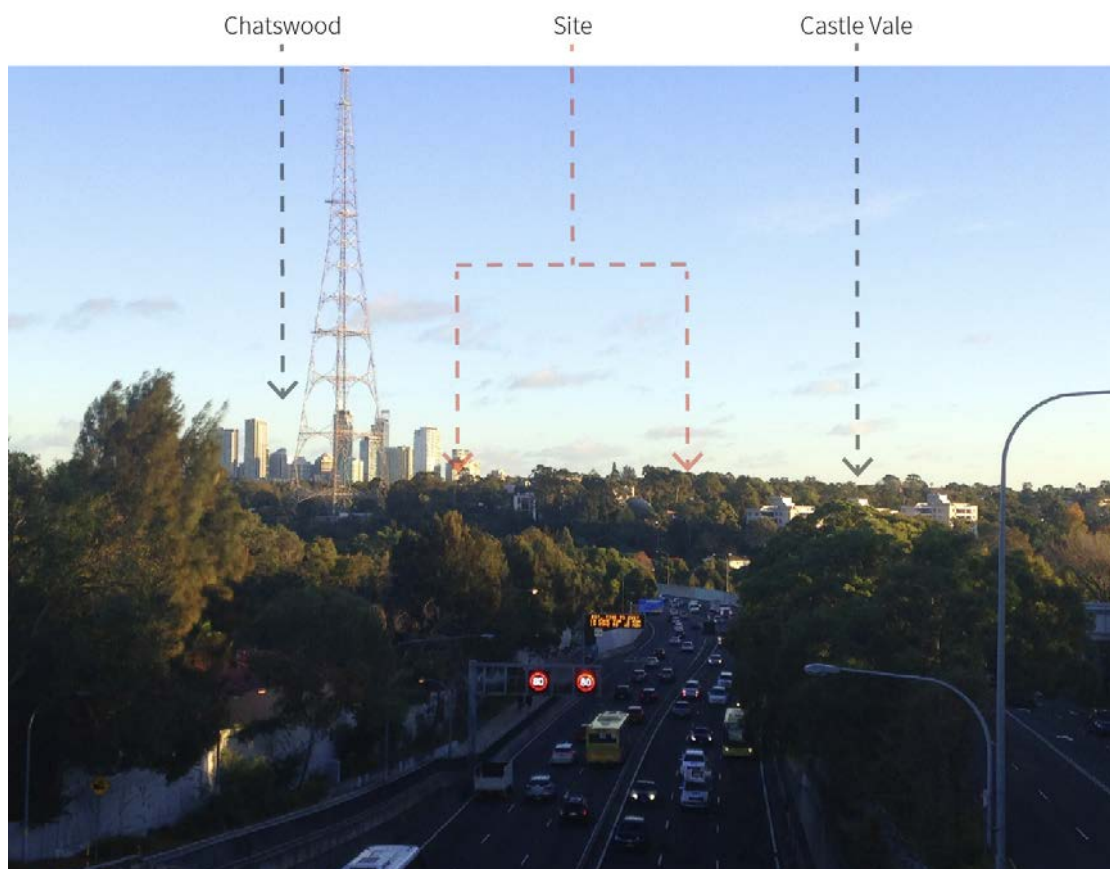


Figure 53 - View toward site from Naremburn pedestrian overpass



Figure 54 - View 01 - Grandview St Naremburn (near Olympia Ave) looking north east with approved envelopes (left) and proposed envelopes (right)

Figure 54 represents the key view from Naremburn that was assessed during the original Concept Plan application (refer to Appendix 1 of Master Plan Report for detailed views). As can be seen in this figure, the realignment of the main public open space and the increase in the setback of taller buildings from the southern boundary results in a building form that appears substantially less bulky and visually intrusive than the approved Concept Plan. Whilst it is apparent that there are some slightly taller building elements proposed in the amended master plan, there is also a substantial increase in the amount of visible skyline within the site and between buildings, providing a more articulated profile that allows for views past the proposed buildings. The visual impact of the amended scheme is considered to be superior to the approved scheme, and can be further lessened through the future detailed design of the building as demonstrated in **Figure 55** below.



Figure 55 - View 01 with indicative detailing added, which will be subject to future detailed design

Source: CHROFI

In light of the above, and the detailed comparison of additional district views contained in the CHROFI Master Plan Report, it is clear that the proposed amendments will result in an improvement to the visual impacts of the residential redevelopment of the Site in comparison to the approved Concept Plan.

6.5.3 Conclusion – Visual Impacts

Perceived visual impacts of the Concept Plan were one of the major points of contention during the assessment of the original development proposal considered by the PAC, and were one of the key reasons given by the PAC in its determination to reduce the maximum height of building envelopes to eight storeys. Overall height is only one component of a visual impact assessment, which must also take into account the separation, setbacks, articulation, visibility of building envelopes and actual visual appearance within a skyline in its context. As demonstrated in the preceding sections and the further analysis contained within the CHROFI Master Plan Report, the proposed

amendments to the master plan would result in a significant improvement to the visual impacts of the approved Concept Plan, notwithstanding the increase in proposed building heights on two limited footprints on the Site. In light of this, it is considered that the proposed modifications should be supported on the basis that they represent an improvement of visual impacts when compared to the current Concept Plan Approval.

6.6 Public Open Space and Landscaping

6.6.1 Public Open Space

Under the proposed modification, public open space on the Site would increase by 164%, resulting in an additional 5,146m² of publicly accessible open space. This increase represents a significant public benefit associated with the modification, which is achieved by providing narrower building envelopes and a rationalised internal road layout.

The approved park on Artarmon Road had a depth from the street of only 25 metres, providing a narrow space that would be more suited to passive recreation and heavily affected by the interface to the road (in terms of safety and noise). The remaining two spaces are isolated and located deeper within the Site located on largely inaccessible internal roadways and footpaths that provide little incentive or legibility for the public to enter the site and utilise these spaces.

Importantly, the modification not only increases the quantum of public open space, but also increases community access to this space. The CHROFI master plan provides for a legible and well-connected public open space network that draws on the key visual axes toward the site along Edward Street and connects through to the underutilised Walter Street Reserve. The public nature of the space will be clearly evident to people travelling along Artarmon Road, and the simplified loop road with on-street visitor parking will provide a simple means of access. The placement of public attractors such as cafes and kiosks at key locations near the entrances and centre of the main public open space will provide an incentive for the public to engage with the open space, as will the new children's playground at the southern edge of the Site.

The new escarpment park at the south of the Site has the potential to be a significant asset for the entire community, with a large expanse of lawn showcasing district and regional views toward St Leonards and the Sydney CBD. The children's playground will provide an engaging and interesting attractor for families within the broader community, whilst the direct public connection from Artarmon Road and Richmond Avenue to the Walter Street Reserve (see **Section 6.5.2**) will connect the area into the valuable east-west open space corridor that touches the southern edge of the Site.

The Landscape Master Plan prepared by McGregor Coxall (refer to Section 3 of the Master Plan Report) in conjunction with CHROFI provides a more defined and descriptive concept for the future embellishment and purpose of each of the public open spaces within the amended master plan. The landscape master plan, which will be subject to further detailed design in consultation with Council and the community prior to the submission of detailed Development Applications for the public domain, describes a series of spaces that will serve the active and passive recreational needs of both the existing and the future communities.

With the increase in the proposed area of the landscaped open space, and the provision of higher quality embellishments than previously approved, the additional dwellings proposed under this amendment will be critical in ensuring the initial feasibility and ongoing viability of maintaining this public space to a high standard. Council took a strong stance against public ownership of the publicly accessible areas of the Site during the assessment of the previous Concept Plan, meaning that the

ongoing cost of maintaining this additional space will fall onto the owners of new dwellings under a Community Title arrangement. Simply increasing the open space to be maintained without a commensurate increase in dwellings would be financially unsustainable and would impact on housing affordability and the long-term quality of these spaces.

On the whole, it is evident that the open space benefits of the amended master plan represent a significant benefit to the whole community in both quantitative and qualitative terms.

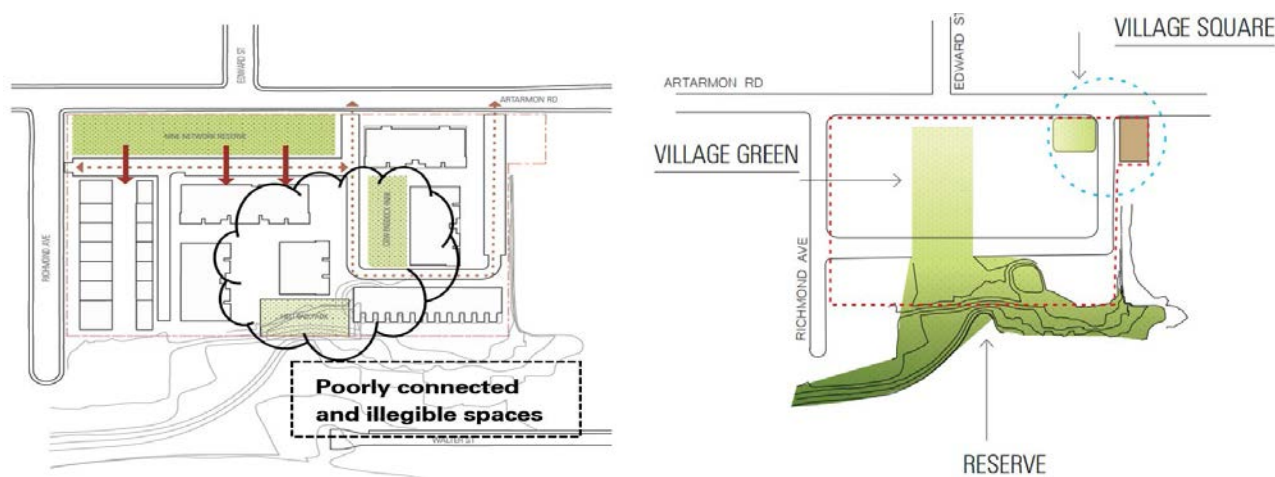


Figure 56 - Comparison of approved (left) and amended (right) open space strategy and connectivity

Source: CHROFI

6.6.2 Walter Street Reserve

Condition 18 of Schedule 3 of the current Concept Plan Approval requires the proponent to provide “an accessible bush track to council requirements through Walter Street Reserve connecting the through-site link with Walter Street”. These works are to be delivered by the developer of the site, either through works-in-kind or a financial contribution to Council to undertake the works. Beyond the construction of this track, there is no requirement for any further upgrades to this public reserve.

Council’s ‘Plan of Management – Naremburn Ward Parks’ (1999) identifies the opportunity to construct pedestrian links through the Walter Street Reserve between Chelmsford Avenue, Richmond Avenue and Walter Street. Weed infestation problems were identified in this plan and continue to be an issue more than 15 years later, preventing the regeneration of this patch of bushland. As illustrated in **Figure 57** below, the Walter Street Reserve is currently in very poor condition and fails to deliver on Council’s objectives for both bushland regeneration and access.

The new public benefit offer described in **Section 5.4** of this report proposes a new \$1 million contribution toward Council to undertake the construction of new access tracks and bushland regeneration works. The proposed contribution is well in excess of the value of the works required under Condition 18 of the existing Concept Plan Approval, and would allow for Council’s planned vision for this Reserve to be fulfilled, resulting in substantial community benefits. In addition, works would be undertaken by the proponent on the southern parcel of land within the Concept Plan Approval site (Lot 12 DP 1162507) to better facilitate the Richmond Avenue access and support the bushland regeneration.

The final program of works will be required to be determined in consultation with Council, adjoining land owners and the local community, ensuring that the community benefit is maximised and integrated with Council's other planned open space and bushland regeneration works.

Providing new access connections through the Site would complete a missing link in a strong east-west corridor of public open space and bushland between Artarmon and Middle Harbour as illustrated in **Figure 58**. Furthermore, the reorientation of the public open space within the site to the proposed north-south axis would allow for this network to be more readily accessed by the existing Willoughby community to the north. Bushland regeneration within the Reserve will have benefits to the broader local environment by reducing the transfer of weeds into local waterways. As such, the additional public benefit delivered by this Modification Application to the Walter Street Reserve is considered to be of significant community and environmental merit and should be supported.



Figure 57 - Images of Walter Street Reserve

Source: CHROFI

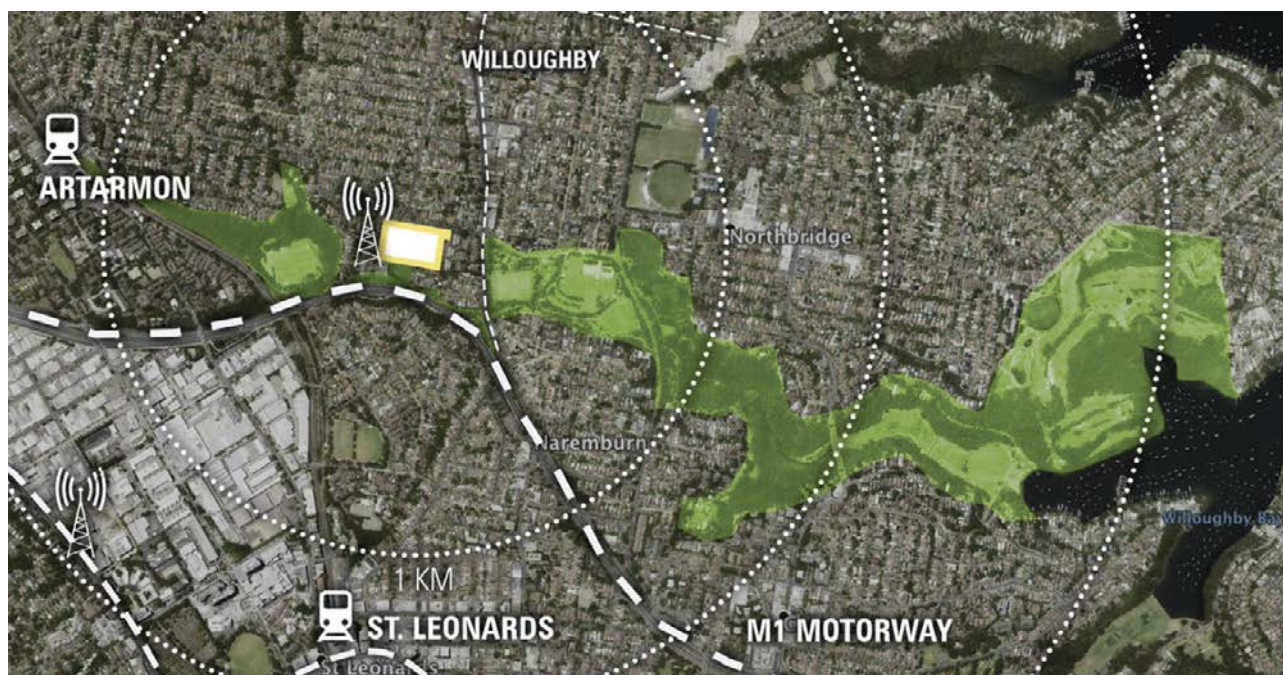


Figure 58 - Existing east west corridor of public open space between Artarmon and Middle Harbour

Source: CHROFI

6.6.3 Tree Removal and Replacement

The amended master plan would result in an additional (net) 13 existing trees being removed within the Site in comparison to the approved master plan. Of these, two were identified as being of high value for retention and are discussed further below. It is emphasised that the modification enables Tree 32 to be retained and celebrated in a new Village Courtyard, which was highlighted as being an important feature in the setting and amenity of the Site.

Trees 18 and 19 are two Red Bloodwood trees approximately 18 metres in height located at the Artarmon Road frontage of the Site near Scott Street (existing). These trees were designated as being of high retention value during the original assessment and were required to be retained under the Concept Plan Approval. Under the amended scheme, these trees are proposed to be removed to allow for the consolidated vehicular access point and roundabout off Artarmon Road. This consolidated access point will significantly benefit site access and traffic conditions, benefiting both the existing and future community.

The removal of these tree will be mitigated by the broader amenity and landscaping benefits of the amended master plan. Scott Street will be planted with a boulevard of native trees that are integrated with the overall landscape master plan and embody the landscaped character of the locality.

The Landscape Concept Plan prepared by McGregor Coxall outlines an indicative landscaping scheme that involves the planting of more than 100 new native trees within the Site. The final landscaping scheme would also include a range of shrubs and groundcover planting, selected from native plant species on Willoughby Council's list of recommended species. This landscaping scheme would be integrated with the urban design outcome for the Site, and will provide significant visual and environmental benefits to the community over the medium and long term.

Further to the above, it is noted that the amended master plan incorporates a proposal to contribute \$1 million to Willoughby City Council for the upgrade of the Walter Street Reserve, which is likely to include the rehabilitation and replanting of native vegetation in addition to that provided within the Site. The Proponent will work with Council and the community to develop a comprehensive works and management plan to improve the ecological values and public utility of this underutilised public reserve.

In light of the above, it is evident that the amended master plan will provide for a significant increase in native trees and vegetation within the Site that will provide a positive landscaped outcome. There will be a significant increase in the number of native trees located within the Site, providing a range of benefits to the existing and local community. The amended master plan provides for an integrated urban design and landscaped outcome that substantially increases the opportunity for publicly accessible landscaped spaces on the Site, with a significant increase in native trees that will more than mitigate the impact of the removal of existing trees on the Site.

6.7 Traffic, Access and Transport

McLaren Traffic Engineering have prepared a Traffic and Parking Assessment (**Appendix J**) to provide an updated assessment for the proposed modification, taking into consideration the design development and consultation undertaken to date. The McLaren report takes into account the earlier findings of the GTA Transport Impact Assessment (July 2016) (**Appendix J**) and also provides a response to matters raised in the Arup Transport Impact Assessment Review (September 2016) prepared for Willoughby City Council.

6.7.1 Traffic Generation and Network Impacts

Traffic Generation

The proposed modification would result in an increase from 400 to 495 dwellings on the Site, with a proportionate increase in the number of associated vehicular movements throughout the day. The following provides an overview of the proposed modification's implications for traffic generation on the Site based on a larger increase of 510 dwellings (per Modification No.1):

- Weekday peak traffic generation from the Site would increase by 36 movements from 128 (approved) to 164 vehicles per hour. The existing traffic generation by Nine is 198 vehicles per hour in the AM peak and 176 vehicles per hour in the PM peak⁹.
- Weekday total traffic generation from the Site would increase by 167 movements from 609 (approved) to 776 vehicles per day. Existing weekday traffic generation is 198 movements in the AM peak and 176 movements in the PM peak.
- Weekend hourly traffic generation from the Site would increase by 28 movements from 100 (approved) to 128 vehicles per hour. The existing traffic generation by Nine is 24 vehicles per hour on weekends¹⁰.

These increases are minor in the context of the existing traffic counts within the local road network, and as outlined below would have acceptable impacts on local intersection performance.

Willoughby Road/ Artarmon Road/ Small Street Intersection

The intersection of Willoughby Road, Artarmon Road and Small Street (the Willoughby Rd intersection) was the key focus of traffic assessment during consideration of the original Concept Plan Application.

Based on updated modelling by McLaren Traffic Engineering, this intersection currently performs at a Level of Service (LoS) B during weekday peak periods, which is defined as 'Good with acceptable delays and spare capacity' under the applicable RMS guidelines (refer **Table 11**). On Saturdays, the intersection currently performs at LoS C, which is defined as 'Satisfactory'. The lower performance level on Saturdays is primarily due to the additional traffic utilising this intersection from Small Street as a result of the operation of the Willoughby Leisure Centre and netball courts.

Table 11- SIDA Intersection Level of Service (Los) Criteria

Level of Service	Average delay per vehicle (seconds)	Description
A	Less than 14	Good operation
B	15 to 28	Good with acceptable delays and spare capacity
C	29 to 42	Satisfactory
D	43 to 56	Near capacity

⁹ GTA Consultants, July 2016.

¹⁰ GTA Consultants, July 2016.

Level of Service	Average delay per vehicle (seconds)	Description
E	57 to 70	At capacity, at signals incident will cause excessive delays
F	Greater than 70	Extra capacity required

The addition of the 400 approved dwellings on the Site in accordance with the Concept Plan Approval would not alter the LoS for this intersection.

McLaren's modelling indicates that, absent of any upgrades, the proposed master plan with 510 dwellings would result in the following changes to the future performance of the Willoughby Rd intersection:

- No change from existing LoS B 'Good with acceptable delays and spare capacity' during the Weekday AM peak;
- Decrease from LoS B to LoS C 'Satisfactory' during the Weekday PM peak; and
- No change from existing LoS C 'Satisfactory' during the Saturday peak.

LoS C is objectively defined as 'Satisfactory' performance for a signalised intersection under the RMS guidelines for intersection assessment. The next level down, LoS D, is defined as 'Near Capacity', which as suggested by the name means that there is still capacity and an upgrade to the intersection is not required. It is only at LoS E 'At Capacity, Incident at Signals Will Cause Excessive Delays' and LoS F 'Extra Capacity Required' that there is a certain need to provide upgrades to the intersection. As such, it is evident that the proposed modifications would not trigger a need for an upgrade to the intersection in their own right.

We note that NSW Roads and Maritime Services (RMS), which is the relevant roads authority for Willoughby Road and this intersection, raised no objections to the proposed modifications in relation to Modification No.1.

The Willoughby Rd intersection currently accommodates between 3,300 and 3,500 vehicles per hour during the weekday peaks and on weekends. The redevelopment of the Site for residential purposes (as amended) would result in only a 0.5% increase in existing traffic volumes at the intersection during the AM Peak and a 2.0% increase in existing traffic volumes at the PM Peak and on weekends¹¹. This increase is considered to be very minor, and as detailed above the intersection will continue to operate with satisfactory performance notwithstanding the proposed amendments to the Concept Plan. In light of this, it is objectively evident that the proposed modifications to the Concept Plan do not give rise to a need to upgrade the Willoughby Rd intersection.

Cumulative Traffic Generation

There are a number of additional future influences on the performance of the Willoughby Rd intersection outside of the scope of this Modification Application, including the cumulative impacts of future residential development along Willoughby Road and Penshurst Street to the north of the Site, Walter Street residential and childcare centre developments to the south and Council's planned upgrade of the Willoughby Leisure Centre on Small Street to the east. It is apparent from

¹¹ GTA Consultants, July 2016.

consultation undertaken during the original Concept Plan assessment and during the preparation of this modification application that there is a broad community desire for this intersection to be upgraded.

Willoughby Council identified the performance of the Willoughby Rd intersection as being a key constraint on its planned upgrades to the Willoughby Leisure Centre during the preparation of the Draft Willoughby Leisure Centre Master Plan (2012). In this master plan, Council prepared a concept design for the upgrade of the intersection involving:

- Providing a new separated right-turn lane for traffic turning from Willoughby Road into Small Street, allowing unimpeded west-bound and north-bound vehicle movements;
- Providing a new left-turn lane for traffic exiting Small Street onto Willoughby Road, reducing conflicts with east-bound traffic turning onto Willoughby Road from Artarmon Road; and
- Re-phasing of the traffic signals to provide quicker and more efficient flow of traffic from Artarmon Road and Small Street onto Willoughby Road.

Recognising the broader community desire and benefit in upgrading the Willoughby Road intersection, the Proponent is seeking to make a new voluntary contribution of \$500,000 to Council for these works to be undertaken. Utilising the funding provided by the Proponent, pooled with local infrastructure levies (S94 contributions) levied on both the Channel 9 redevelopment and other development within the locality, Council would be responsible for refining the concept intersection design, acquiring any land required, liaising with the NSW Roads and Maritime Services and physically undertaking the upgrade works. The timing of payment of the voluntary contribution would be agreed between the Proponent and Willoughby City Council as part of the negotiation of the proposed VPA.

On the basis of the above, however, it is clear that the Willoughby Rd intersection could operate at a satisfactory LoS without upgrades should the proposed modification be approved.

Site Access Points

Under the current Concept Plan Approval, Condition 10 of Schedule 3 limits the two approved vehicular access points to Artarmon Road (Scott Street and new driveway) to left-in, left-out vehicular movements only. In addition, Condition 11 requires the upgrade of the Richmond Avenue intersection to be upgraded to a roundabout. These conditions are shown in **Figure 59**. The effect of this approval would be to force all traffic exiting the Site toward Willoughby Road to either:

- Leave via the Richmond Avenue exit, substantially increasing traffic levels on this road; or
- Exit left via the Artarmon Road access points, drive up to Edward Street or the new Richmond Avenue roundabout, perform a U-turn and then drive back towards the Willoughby Rd intersection.

Neither of these outcomes is considered to be optimal from a local traffic perspective. In particular, it would result in all new east-bound traffic exiting the Site during the AM weekday peak travelling through the Edward Street/Artarmon Road intersection, reducing opportunities for traffic from Edward Street to safely enter the flow of traffic along Artarmon Road.

The amended master plan seeks to establish a far more rational traffic arrangement, with a simple loop road and only one access point to each of Artarmon Road and Richmond Avenue (**Figure 60**). A new roundabout located on Artarmon Road would allow for the majority of traffic to and from the

Site to be directed to Willoughby Road with minimal impact on the established residential areas surrounding the Site. The need for a roundabout at Richmond Avenue (as per the current approval) is removed due to the ability for traffic to exit the Site in an east-bound direction from the new Artarmon Road roundabout.

Modelling by GTA indicates that the proposed roundabout would perform at LoS A (Good Service) at all peak weekday and weekend periods, and would not be adversely impacted by queuing on the Artarmon Road approach to the Willoughby Rd intersection. Traffic flows from the Site into the roundabout during peak periods would not significantly impact upon or delay the movement of existing traffic along Artarmon Road heading east toward Willoughby Road.

McLaren and GTA have confirmed that the proposed roundabout location is suitable from a traffic safety perspective, subject to detailed design, and achieves the required sight lines and visibility. All land required for the construction of the roundabout would be within the existing road reserve or the Site.

As noted in **Section 5.5** of this report, the option of limiting the Richmond Avenue entrance to an ingress-only design has been contemplated in the development of the amended master plan. This is not currently documented in this application, due to the limited extent of feedback received on this option. The modification would re-direct traffic leaving the Site in a westerly direction to exit via Artarmon Road rather than Richmond Avenue, reducing overall traffic movements on Richmond Avenue. GTA have confirmed that this arrangement, if pursued, would not give rise to any additional local traffic impacts.

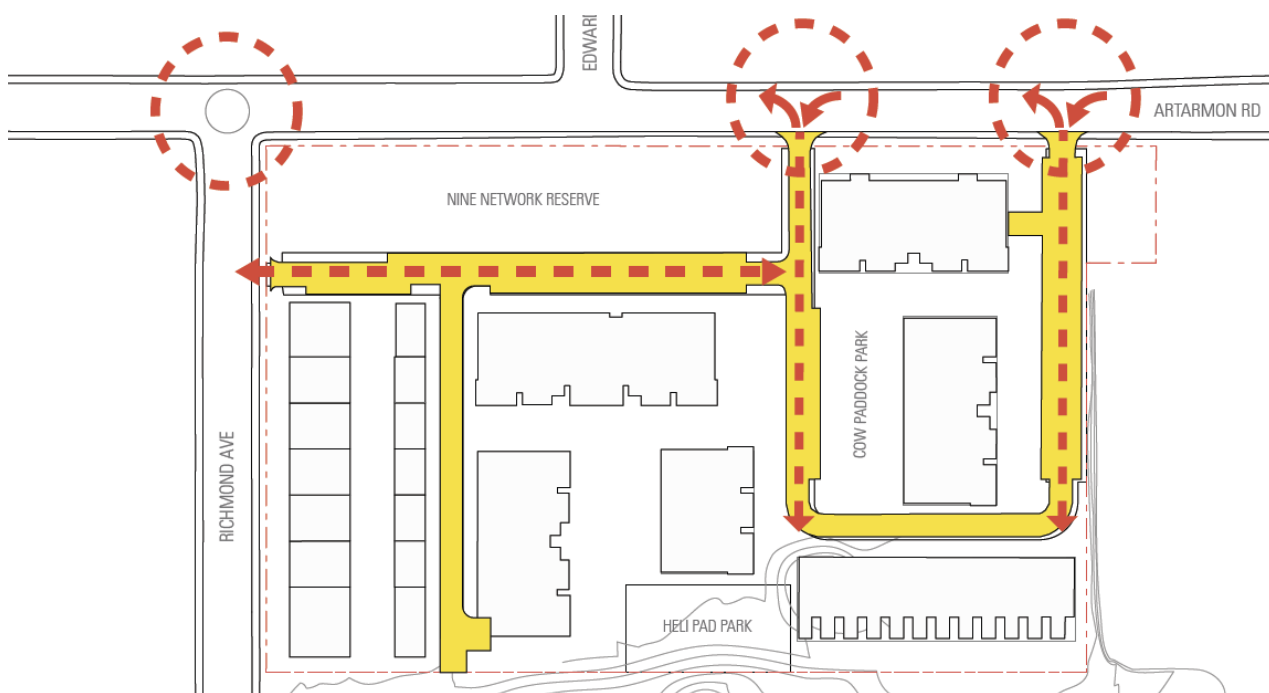


Figure 59 - Currently approved site access arrangements

Source: CHROFI

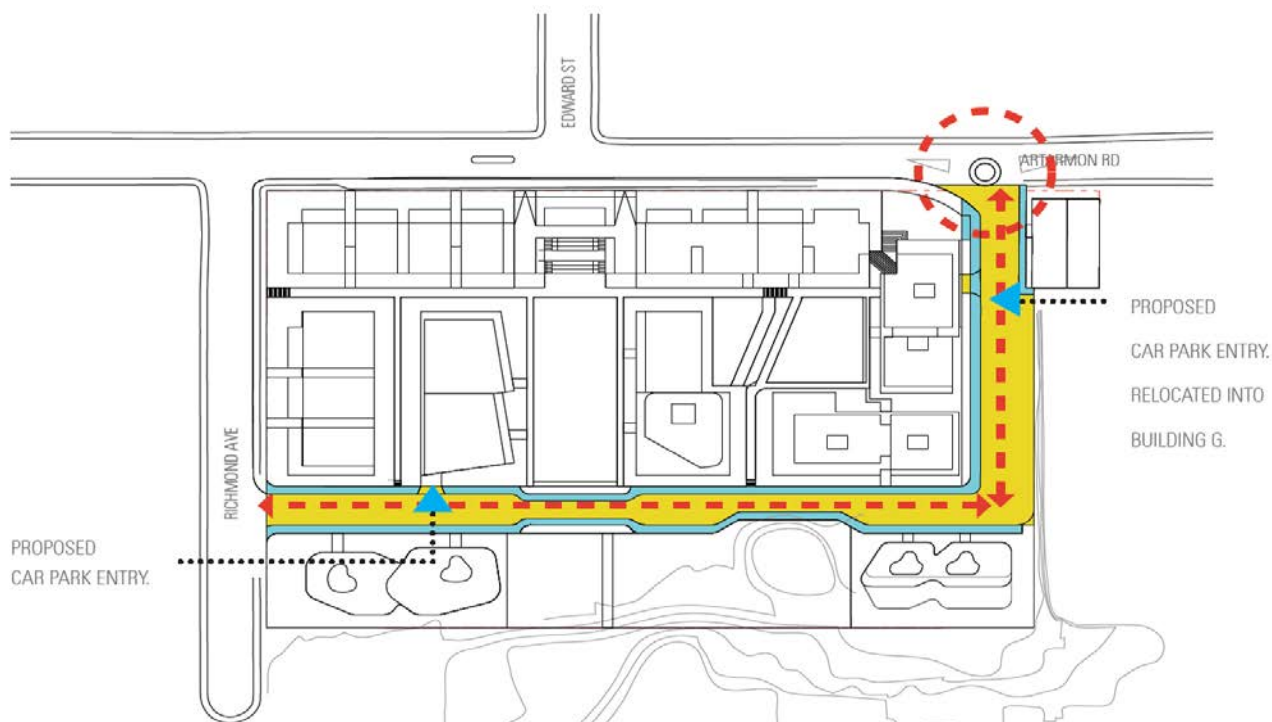


Figure 60 - Proposed site access arrangements

Source: CHROFI

Other Local Intersections

In addition to those key intersections discussed above, GTA also studied and modelled the impact of the proposed modifications to the Concept Plan on the intersections of Artarmon Road with Scott Street, Edward Street, Richmond Avenue and Wyalong Street. All of these intersections will continue to operate at LoS A (Good Operation) with the amended proposal not resulting in any significant impacts on traffic conditions at these locations.

Conclusions

The proposed amendments to the existing Concept Plan Approval will result in:

- Improvements to existing conditions at the intersection of Willoughby Road, Artarmon Road and Small Street during weekday peaks and on weekends for traffic travelling along Artarmon Road;
- Additional capacity being provided at the Willoughby Rd intersection to support Council's planned expansion of the Willoughby Leisure Centre, providing a broader public benefit by resolving an existing local traffic issue;
- A more rational and efficient internal road layout and site access arrangements, reducing potential impacts on existing local traffic conditions and increasing the site area that is able to be dedicated toward publicly accessible open space.

Notwithstanding the increase in traffic generation from the Site, the refined traffic arrangements and proposed contribution to the Willoughby Rd intersection will result in a net improvement to traffic conditions within the locality, benefiting both the existing and future local communities. Importantly, these outcomes are directly supported by the proposed amendments to the site master plan, including the additional dwellings that allow for these additional works to be viably undertaken.

Parking

This Modification Application does not seek to change the approved parking rates specified in Condition 29 of Schedule 3 of the existing Concept Plan Approval. Whilst there will be an increase in the total number of resident and visitor parking spaces provided within the Site as a result of the increase in total dwellings, the rates per apartment type were determined to be appropriate during the original assessment phase due to the Site's location and transportation context. The approved rates are consistent with Council's Development Control Plan.

All car parking will be located within building basements that are typically confined to the footprint of the building above. This will allow for deep soil landscaping within the Site to be maximised. All basement entrances will be via the internal loop road, with no additional driveways to Artarmon Road or Richmond Avenue beyond the two proposed site access points.

As required by the existing Condition 30 of the Concept Plan approval, the internal loop road has been designed to accommodate on-street parking on both sides wherever possible. The additional parking provided on this new street entirely offsets the reduction in parking on Artarmon Road and Richmond Avenue associated with the construction of new site access points. The modification application will provide for 40 additional on-street visitor parking spaces in comparison to the existing on-street parking provision, as demonstrated refer to **Table 12** below.

Table 12- Breakdown of on-street public visitor parking

Scenario	On-Street	Scott Street Internal Road	Total
Existing	69	9	78
Approved Concept Plan	69	51	120
Modification Application	52	66	118
Existing	69	9	78

This parking will be for general visitor parking for persons utilising the public open space, commercial tenancies or visiting residents of the new residential community. The appropriateness of imposing time-limits for visitor parking on this new street will be discussed with Council as part of the future Development Application(s) for the roadway. This would be to ensure that on-street parking is available for visitor use and is not used for car storage or park-and-ride associated with the Willoughby Road bus services.

The additional dwellings will also contribute to improved viability of car sharing on the Site, which will be incorporated within the development, and could potentially support an increased number of car-share vehicles being provided.

6.7.2 Public Transport

During the original Concept Plan assessment, and during preliminary consultation for the amended master plan, the impact of the redevelopment of the Site on city-bound bus services along Willoughby Road was raised as an area of community concern.

The Site is located between 150 and 350 metres walking distance from bus stops on Willoughby Road located immediately to the north of the Artarmon Road intersection. Four existing public bus routes service these stops, connecting the Site to Neutral Bay, Chatswood, North Sydney and the

Sydney CBD. Of particular note are the M40 and 272 services. On these services, there is only one further stop (Willoughby Rd near Garland Rd) to the south of the Site before these buses enter the Sydney CBD. 32 city-bound services operate on these routes departing the closest bus stop to the Site between 7am and 9am on a regular weekday, equating to 16 services per hour. Depending on traffic, the travel time between the nearest bus stop and Wynyard Station is between 10 and 20 minutes. On average, these bus services are faster than existing train services between Chatswood and Wynyard and just as frequent. On this basis, the Site is considered to be extremely well-served by public transport.

The NSW Government is currently constructing two major transport infrastructure projects that will reduce bus congestion on the Gore Hill Freeway and increase capacity for buses from the Lower North Shore to enter the Sydney CBD. The Metro Northwest (and Metro Sydney) will substantially reduce the number of city-bound bus services entering the CBD from The Hills and broader north west area, whilst the CBD and South East Light Rail will reduce the number of buses entering the CBD from Sydney's south-eastern suburbs. Both of these improvements are scheduled for completion before any dwellings are likely to be completed on the Site, and will allow additional bus capacity to be provided on Willoughby Road as required by future passenger demand.

Further to the above, the increase in passenger demand arising from the additional 95 dwellings proposed for the Site under the amended master plan would be minimal in the context of existing passenger loadings, and are not expected to result in any significant impacts on overall utilised bus capacity.

6.7.3 Pedestrian and Cyclists

The CHROFI master plan provides for a significantly more permeable and walkable development outcome that would encourage members of the public and future residents to walk and cycle through the Site.

As discussed in **Section 6.6** the amended master plan provides a significant new public open space with pedestrian pathways that connects a substantial existing residential population to the north (Willoughby) directly to an underutilised public reserve immediately to the south (Walter Street Reserve). As outlined in **Section 5.2.3** of this report, the Proponent is seeking to make a voluntary financial contribution or undertake works-in-kind to the value of \$1 million within the Walter Street Reserve and surrounding open space to improve accessibility and ecological values. When these two considerations are combined with the existing east-west cyclist and pedestrian path along the Gore Hill Freeway, the proposed modifications represent a significant potential improvement to local and regional connectivity.

Cycle parking would be provided within the publicly accessible open space for use by the general public, and within individual buildings for residents and visitors in accordance with Council's requirements as determined at the Development Application stage.

Condition 17 of Schedule 3 of the Concept Plan Approval requires that a raised pedestrian crossing be provided on Artarmon Road to the west of Edward Street where projected demand meets the standard thresholds to warrant this type of crossing. If the applicable criteria are not met, the condition requires that a speed hump be provided. Initial analysis by GTA indicates that it is unlikely that the threshold for a raised pedestrian crossing would be met, and as such it is proposed to provide a pedestrian refuge only. This modification application does not seek to amend Condition 17, however, and if the thresholds are met then the Proponent would certainly provide a raised pedestrian crossing.

6.8 Heritage

A Supplementary Heritage Impact Statement has been prepared by Godden Mackay Logan (GML) and included at **Appendix L**. An assessment of the heritage significance of the subject Site and its archaeological potential was undertaken as part of the Concept Plan application. This prior assessment confirmed that the existing buildings on Site had limited historic value, with the extent of this value originating from the visual context of the Site and the prominence of the TXA transmission tower. The Concept Plan was also confirmed to have no likely impact on archaeological artefacts, which does not need to be reassessed as a result of the proposed modifications.

Within the locality of the Site there are a number of commercial and residential buildings identified as being local heritage items under Schedule 5 of the WLEP or State heritage items under the State Heritage Register. The impacts of the modified proposal on the heritage significance of these structures is determined to be negligible. The rearrangement of building envelopes, and the proposed increase in building heights in the centre of the Site, means that the majority of the proposal retains the bulk and scale as the approved scheme and provides an appropriate transition in height to the surrounding area.

Accordingly, whilst the buildings will continue to be visible in the setting of a number of these heritage items, the visual impact of the modified scheme is not substantially different from the approved concept and from a locality contextual perspective is actually improved as outlined in detail at **Section 6.5**. This will therefore not adversely impact on the heritage significance or the appreciation of the setting of these items and has been assessed as “negligible” by GML.

In addition to this, GML Heritage have undertaken an assessment of the modified Concept Plan in relation to the Artarmon Heritage Conservation Area located to the north west of the Site. This conservation area does not directly adjoin the Site and as such will not be physically impacted by development resulting from the modified Concept Plan. Furthermore, in view of the topography of the area, the proposed development will not be visible from most areas of the public domain within the centre, northern, or western parts of the conservation area. The impact on the southern and eastern portions of the conservation area will remain consistent with the approved concept plan.

The revised heights of the buildings on Site and the rearrangement of open space means the future building envelopes will be partially visible from the conservation area, consistent with the approved scheme. The modified Concept Plan adopts a graduated height transition, allowing for the edge of the buildings along Richmond Avenue and Artarmon Road to screen some of the lower building mass of the tower buildings behind and reduce the perceived scale of these buildings. Accordingly, it is confirmed by GML that the proposed modifications *“would have negligible additional impacts on the streetscape value of the majority of the Artarmon Conservation Area”*.

GML conclude that *“the heritage impacts of the proposed S75 modification are substantially the same as those assessed in the 2012 HIS”*.

6.9 Other Matters

6.9.1 Ecologically Sustainable Development

The CHROFI Master Plan Report includes a statement identifying the guiding ESD principles for the master plan which will guide detailed building and site infrastructure design. The approved Concept Plan established principles for ESD performance for the site. These principles continue to be reflected in the amended CHROFI master plan and are intended to ensure that future development achieves a high level of environmental performance which adopts a more holistic approach to sustainability than traditional approaches to water and energy efficiency. ESD principles for the amended Concept Plan are:

- **Energy** – The amended master plan incorporates passive design principles to allow the apartments to exceed minimum BASIX energy efficiency requirements. Specific apartment and common area energy efficiency and metering will be addressed in detailed design at the Development Application stage.
- **Indoor Environment Quality** – The amended master is designed to meet the objectives of indoor environmental quality provisions for residential amenity under the Apartment Design Guide, specifically daylight, thermal comfort, private external space and natural ventilation.
- **Transport** – the site is well served by public transport which will minimise vehicular movements during peak periods. The amended master plan adopts on-site parking rates in accordance with the existing Concept Plan approval and Council's specified rates, which is expected to discourage on-street parking. Provision for incorporation of a car-sharing scheme within the Site will be made in the detailed design of on-street parking within the internal loop road. Bike storage facilities will be provided in order to promote non-car travel modes to improve health and reduce congestion and pollution.
- **Water** – the amended master plan will allow for stormwater reuse for irrigation and water efficient fixtures and fittings, with a Stormwater Concept Plan required to be submitted to Council prior to the first Development Application under the conditions of the existing approval. No water based cooling systems would be included in future development.
- **Materials** – Material selection is subject to detailed design, however, materials will be carefully selected to ensure a high standard of environmental performance and safety and will be detailed at the Development Application stage.
- **Land Use and Ecology** – The redevelopment of the Site will achieve reuse of existing urban land, reclaiming some contaminated land, an improvement in the ecological value and the potential inclusion of communal garden facilities in the public open space. Furthermore the proponent is proposing to contribute \$1 million toward the upgrade of the Walter Street Reserve, including for bushland regeneration, which will improve the ecological values of this public reserve and reduce the existing impacts of weed transfer from this reserve into local waterways.
- **Emissions** – Site stormwater management plan is to ensure that post development flows from site are not greater than current flows.

Environmental performance of individual buildings will be assessed in detail as part of future Development Applications, and the amended master plan continues to ensure that above-BASIX performance can be achieved in accordance with the requirements of the existing Concept Plan approval.

6.9.2 Community and Social Infrastructure

The Environmental Assessment Report for the original Concept Plan application included a detailed assessment of the impact of the residential redevelopment of the Site on local community and social infrastructure. The amendments to the Concept Plan do not give rise to any substantive change to this assessment, which was for 400 dwellings and found the impacts to be acceptable.

During the assessment of the original Concept Plan application, and in preliminary consultation during the preparation of the amended CHROFI master plan, the potential impact of the residential redevelopment of the Site on local public school capacity was raised as a significant issue of community interest being raised in over half of public submissions.

Based on a demographic analysis of apartment occupancy within the Willoughby LGA (**Appendix M**), the revised projections for school-aged children residing on the Site under the amended CHROFI master plan of 495 dwellings are as follows:

- 39 students attending local public primary schools, and 19 students attending local independent primary schools
- 23 students attending local public secondary schools, and 35 students attending local independent secondary schools.

The additional 95 dwellings proposed under the amended master plan would only result in an additional 7 public primary school students and 4 public secondary school students above the demand already projected from the approved dwellings. This is a minor increase, particularly given the substantial additional investment in education capacity that is underway and/or planned for the Willoughby area and the long lead-in time before the redevelopment of the Site actually occurs due to Channel 9's ongoing occupation of the Site.

Further, the NSW State Budget 2013/14 included substantial new funding to increase the capacity of public schools within Northern Sydney. The Budget provided \$70 million of new funding from general revenue for the following works:

- Northern Sydney Primary Schools Upgrade Stage 1 to be completed in 2014, including:
 - 12 new classrooms at Chatswood Public School.
 - 4 new classrooms at Artarmon Public School.
 - 4 new classrooms at Lane Cove West Public School.
- New Anzac Public School at Cammeray.
- Mowbray Public School Upgrade.

Furthermore, the recently released 2016/17 State Budget provides further additional funding for the commencement of works on:

- New Lindfield Learning Village (K-12)
- Cammeraygal High School, Crows Nest (new senior campus).
- Willoughby Public School Upgrade.
- Willoughby Girls High School Upgrade.

It is noted that it is not the policy of the NSW Government to levy private developers for the cost of education infrastructure within established urban areas¹². The Department of Education is aware of the current approval for the redevelopment of the Site, and will have sufficient time to plan for the projected minor increase in student enrolments arising from new dwellings on the Site.

Nine has the ability to remain on the site under its sale and lease-back agreement with LEPC9 until 2020. As such, it is not expected that the first stage of dwellings on the site would be occupied until 2022/23 at the earliest. There are some 6-7 years, therefore, until there would be any additional demand for local schools as a result of the redevelopment of the Site. This is in a time where new school infrastructure and funding will be coming to fruition.

In light of the above, it is considered that the increase in school demand from the additional proposed dwellings is minor, particularly in light of substantial additional infrastructure funding by the NSW Government, and can be appropriately accommodated by the Department of Education prior to the occupation of any dwellings on the Site.

6.9.3 Electromagnetic Radiation

An Electromagnetic Analysis of the subject Site has been prepared by Kordia Solutions and included at Appendix N. This analysis addresses the potential impacts of radiofrequency fields propagating from the TXA lattice tower located immediately adjacent to the Site.

The electric fields have been assessed against the Australian Radiation Protection and Nuclear Safety Agency's (ARPANSA) Radiation Protection Standard – Maximum Exposure Levels to Radiofrequency Fields – 3kHz to 300 GHz. Under the ARPANSA standard, the General Public Reference Level (GPRL) is considered the maximum level of exposure for residential and office uses.

Previous measurements conducted as part of the original Concept Plan application confirmed that the electric field readings were well within the GPRL, with the mean of the 31 readings being 0.3% of the GPRL and the highest reading being only 28% of the GPRL. This maximum reading was taken approximately 10m from the base of the mobile phone base station antenna mounted on an adjacent TV studio building roof, which is to be removed with the studio building as part of the redevelopment of the subject Site.

Accordingly, the revised readings undertaken as part of this application have confirmed that there is no substantial increase in the maximum RF field level, which is anticipated to be approximately 5% of the general public reference level at the roof level of the proposed development Site. This remains well within the GPRL, re-confirming that the proposal for residential accommodation, small scale commercial uses and a child care centre can be suitably accommodated on the Site.

6.9.4 Wind Impacts

A Pedestrian Wind Environment statement has been prepared for the amended master plan by Windtech (**Appendix O**). Taking into account the local climactic wind conditions and the proposed building envelopes, the report makes a number of recommendations for the future detailed design of buildings and landscaped open space to ensure that all outdoor trafficable areas within and around the development will be suitable for their intended purposes. Overall, and subject to future detailed design, the assessment concludes that the master plan is capable of ensuring appropriate pedestrian wind environments are achieved throughout the Site.

¹² Planning System Circular PS 07-018 Development Contributions (6/11/2007) states that "the costs of the construction and operation of social infrastructure facilities such as schools and TAFEs, hospitals and emergency services will be borne by the State Government."

Future Development Applications for the public open space, internal pedestrian areas and taller building elements (Buildings D, E and F) will be required to demonstrate that appropriate wind mitigation measures are incorporated as required, and that the final design will ensure that appropriate pedestrian wind environments are achieved. An additional provision has been included in the Statement of Commitments at **Appendix G** to ensure that this requirement forms part of the future planning assessment and approvals framework for the Site.

6.9.5 Crime Prevention Through Environmental Design

The amended CHROFI master plan incorporates consideration of safety and security within the master plan, and has adopted design principles to minimise the incidence of crime by addressing the principles outlined in the Department of Planning's guidelines titled '*Crime prevention and the assessment of development applications*' (2001), being surveillance, access control, territorial reinforcement and space management.

The amended master plan makes the following positive contribution in terms of safety and security, in accordance with the recommended design principles of CPTED and SEPP 65, by:

- Providing for strong passive and active surveillance of all publicly accessible and communal open spaces within the site through the orientation and positioning of apartment buildings;
- Provides for clear delineation between publicly accessible areas and private or communal areas;
- Includes clear methods of public access and an internal loop road that is clearly accessible and navigable for visitors to the site;
- Clear sightlines between spaces including public and private interfaces are established through the master plan and will be further detailed in building design and landscape treatments;
- The re-orientation of the main public open space to the axis of Edward Street provides for a natural connection that is clearly accessible to the public and which encourages public interaction with the site throughout the day; and
- Optimise visibility, functionality and safety of buildings by orientating entrances towards the internal roads and providing clear lines of sight between entrances, foyers and the street.

6.9.6 Stormwater Management

An Integrated Water Management Plan was prepared by Cardno to support the original Concept Plan application. This plan identified that there are opportunities to:

- Capture rainwater from non-trafficable building rooftops for the irrigation of publicly accessible and communal landscaping, as well as for other communal non-potable water uses;
- Employ best-practice water sensitive urban design techniques within the landscaping of communal and publicly accessible open spaces within the Site;
- Ensure that there is a neutral or beneficial outcome in terms of the quality and velocity of stormwater discharge from the Site;
- Provide on-site stormwater detention within the future development of the Site in accordance with Willoughby City Council's development and engineering standards; and
- Minimise water consumption on common property and within future dwellings in order to reduce pressures on water supply infrastructure through employment of water-savings measures.

These opportunities continue to be relevant to the amended CHROFI master plan, which reduces the area of roadway and building coverage on the site and increases the proportion of soft landscaping to improve stormwater management outcomes. Future detailed design in accordance with the amended master plan (subject to approval), will involve further consideration of the stormwater infrastructure, water storage and reuse mechanisms, site discharge points and potable water consumption efficiency measures as part of detailed Development Applications for infrastructure, landscaping and buildings.

Condition A7 of Schedule 2 of the Concept Plan Approval requires that, prior to the submission of the first Development Application or issue of a subdivision certificate, a Stormwater Concept Plan be submitted to and approved by Council. The stormwater concept plan shall incorporate measures to harvest stormwater and reuse for irrigation of landscape gardens and open space. Condition 22 requires that all final landscape plans are to incorporate best practice water sensitive urban design measures. As such, it is considered that the existing conditions and future planning framework are appropriate and do not require further amendment or augmentation as part of this modification application.

6.9.7 Geotechnical and Structural

Pells Sullivan Meynink (PSM) undertook a desktop assessment of the geotechnical aspects of the originally exhibited Concept Plan. PSM found that the site is underlain by Hawkesbury Sandstone, which is the rock unit that underlies much of the Sydney Region. The geotechnical characteristics of Hawkesbury Sandstone are well understood and many significant excavations and tunnels have been constructed within this formation.

PSM identified the key risks associated with the development of the Site will be the basement excavations that may involve excessive movement of the overburden or rock face into the excavation.

PSM advise that the identified risks can be managed through the following measures:

- Development of excavation shoring (retaining walls) design and associated construction sequence;
- Where rock faces are left unsupported, use of localised support through rock bolts, installed in areas identified by a geotechnical engineer;
- Implementation of an appropriate geotechnical monitoring and inspection programme; and
- Dilapidation surveys of adjacent land and structures prior to excavation

These recommendations continue to be relevant for the amended CHROFI master plan, and can be appropriately dealt with at the DA assessment phase.

7.0 Conclusion

The proposed modification to the Concept Plan Approval offers a number of significant benefits to the existing and future Willoughby community, including:

- Significant improvements to the urban design framework for the Site resulting in a reduction in the environmental impacts, such as overshadowing and visual impact, the delivery of a better transitional scale to the surrounding areas and a higher quality master plan design outcome.
- 164% increase in public open space within the Site and improvements to the accessibility, quality and connectivity of this space to better meet the needs of the community and integrate with Council's established open space network and retain significant trees.
- \$500,000 financial contribution toward the upgrade of the intersection of Willoughby Road, Artarmon Road and Small Street, which has already been conceptually planned by Council to support the upgrade of the Willoughby Leisure Centre. The existing and future performance of this intersection was the source of significant community concern during the original assessment phase, and the upgrade will see future performance that is better than current conditions during all weekday peak periods and better than the approved weekend conditions.
- \$1 million financial contribution for bushland regeneration and access improvements of the Walter Street Reserve, which have been identified in Council's Plan of Management since 1999 but have not been able to be fulfilled. These upgrades will significantly improve community access to and between existing open space areas, as well as having a number of local environmental benefits.
- Additional affordable housing provision in accordance with Council's requirements in proportion to the increase in total dwellings, and overall housing to support Willoughby's future projected population growth.

These benefits are additional to the existing Concept Plan approval and are directly supported by an increase in the number of dwellings proposed on the site to a total of 495 apartments. Importantly, whilst both the number of dwellings and maximum building heights are proposed to be increased, the actual environmental and social impacts of the amended CHROFI master plan are no greater and in many instances better than the currently approved master plan. In particular:

- Net improvement to overshadowing impacts on dwelling houses in Walter St.
- Net improvement to the overshadowing impacts on existing apartment buildings in the adjoining Castle Vale development.
- Appropriate transitions in the scale of building forms, particularly at sensitive low-density residential interfaces such as Walter St and Artarmon Rd.
- Reduction in the visual impact of the redevelopment of the Site through the sensitive placement of taller building elements, intelligent spacing of buildings and a narrowing of proposed building envelopes.
- Safer site access to Artarmon Road and Richmond Avenue through a refined traffic and access strategy.
- Minimal increases in demand for social infrastructure such as local public schools, with new demand from the Site not arising until at least 2023.

In light of the above, we consider the proposed modifications to represent a substantial improvement to the current Concept Plan and we have no hesitation in recommending that this Section 75W Modification Application be approved.