INNER WEST COUNCIL

ELECTRONIC ATTACHMENTS

for

BUSINESS PAPER

6.30PM, TUESDAY, 22 OCTOBER, 2019

PAGE NO.

Item 2 Post Exhibition Report - Draft Amendments to the (Precinct 47) Victoria Road Precinct Component of the Marrickville Development Control Plan 2011 and the Draft (Precinct 47) Victoria Road Precinct Sub-plan Amendment to the Marrickville Contributions Plan 2014

Item 5. 74 Carlton Cresent, Summer Hill - Supplementary Report to Sydney Eastern Planning Panel

9.47 STRATEGIC CONTEXT VICTORIA ROAD

DRAFT VICTORIA ROAD PART 9.47 DCP AMENDMENT

- POST EXHIBITION VERSION

October 2019

Marrickville Development Control Plan 2011

Contents

Part 9 Strategic Context

9.47 Victoria Road (Precinct 47)

9.47.1 Introduction

This section of the Development Control Plan (DCP) establishes a framework to guide development in Precinct 47 – Victoria Road (the precinct).

9.47.1.1 *Land to which this section of the DCP applies*

This section of the DCP applies to development within the boundary of the precinct as shown in *Figure 1: Land application - Precinct 47 – Victoria Road Precinct, Marrickville.*

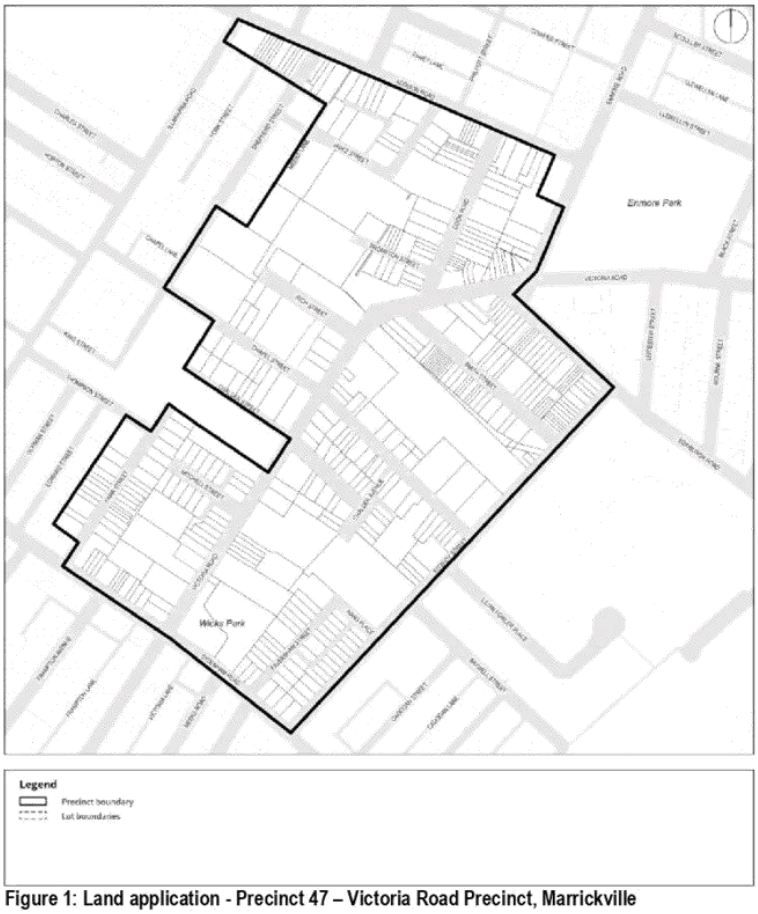


Figure 1: Land application - Precinct 47 – Victoria Road Precinct, Marrickville

9.47.1.2 *Aims and objectives of this section of the DCP*

The purpose of this section of the DCP is to guide the future development of the precinct by:

1. Identifying the desired future character, development principles, key elements and indicative structure for the future development of the precinct;
2. Communicating the planning, design and environmental objectives and controls against which the consent authority will assess future development applications;
3. Ensuring the orderly, efficient and environmentally sensitive development of the precinct;
4. Promoting a high-quality urban design outcome;
5. Ensure key infrastructure is delivered for future residents and the community; and
6. Ensure access within the precinct is inclusive by delivering a high quality urban/public domain which is accessible beyond a minimum compliance approach and which caters for equitable, dignified, safe and easy to use access for all. This will take account of the broader needs, circulation and orientation requirements of the planned future significant increase in employees and residents within the precinct.

9.47.1.3 *Relationship to other sections of the DCP*

This section forms part of the Marrickville Development Control Plan 2011 (Marrickville DCP 2011). It sets out specific controls to guide the future development of the precinct. Development within the precinct will need to have regard to this section of the DCP as well as other relevant provisions in the DCP. In the event of any inconsistency between this section and other sections of the DCP, this section will prevail to the extent of the inconsistency.

(*See Figure 2 – Context map – next page*)

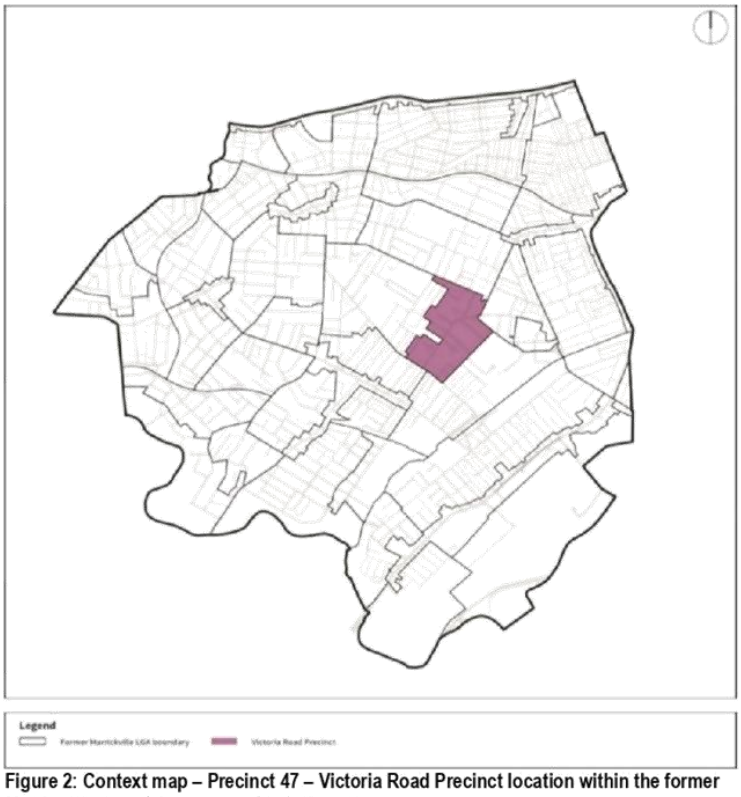


Figure 2: Context map – Precinct 47 – Victoria Road Precinct location within the former Marrickville Local Government Area Boundary

9.47.2 Existing Character

The area is bounded by Addison Road to the north, Fitzroy Street to the east, Sydenham Road to the south and generally by the rear of properties facing Shepherd Street to the west. Victoria Road is the main north to south link through the precinct linking to Enmore Road. A number of east-west links exist, though many are cul-de-sacs used for access and loading bays for industrial sites.

The precinct contains a mixed character, though, overall, it is dominated by industrial land uses. Residential dwelling houses are interspersed between industrial factory units. Business and local retail uses are also located along some of the main roads in the precinct such as Addison Road and Enmore Road. Light industrial uses are located along the northern side of Farr Street that create a buffer for the adjoining residential properties. Other land uses within the precinct include the Marrickville Bowling and Recreation Club and Wicks Park.

The precinct has a very irregular subdivision pattern (as seen in Figure 1). Whilst there are some large industrial sites, many of them have been fragmented into smaller individual industrial sites. Access to many of the industrial sites is provided through rear lanes and cul-de-sacs. The Marrickville Public School is located outside the precinct boundaries but is situated in the middle of the precinct, with long interfaces to the surrounding industrial area.

The building stock within the precinct is mixed. It contains a number of old industrial buildings, some of which have been adapted for modern industrial uses and some of which remain in their original state. Those original buildings are predominantly brick constructions built to the boundary with small openings for vehicles. Some have been rendered and painted with their opening expanded to accommodate modern industrial requirements. There are also some examples of new, modern industrial developments containing a number of tenancies utilising the same access point and providing on-site parking and loading facilities. However, the majority of industrial buildings are older, relatively small and limited in size.

Notwithstanding these constraints, information obtained from Council's Social and Cultural Planning Staff indicates that the current built form of the precinct, presently meets some of the important social and cultural needs of residents and employees of the Inner West. For example, the precinct houses three (3) of the Local Government Area's (LGA) most significant live music venues: the *Red Rattler*, *Marrickville Bowling & Recreation Club*, and the *Factory Theatre*. Furthermore, the relatively lower cost, factory and warehouse spaces that presently exist within the precinct, have for a number of years, provided suitable large, versatile spaces for creative industries within the Inner West, particularly, for potentially large scale work, such as sculpture.

The large number of small industrial sites, however, has led to traffic issues for the precinct. This is less of an issue on sites backing onto cul-de-sacs as it does not impede the flow of traffic. However, traffic conflicts occur between large vehicles accessing industrial sites on streets also catering for through traffic. This is particularly the case where sites are unable to cater for loading and unloading on-site due to their size or configurations. This problem is particularly acute for older industrial sites which tend to be less able to cater for modern vehicles such as large trucks and other delivery vehicles. As a result, large trucks are often forced to stop in the middle of the road for loading and unloading rather than being able to accommodate this function on-site.

The large industrial complexes that were prevalent in the 1960s/1970s no longer exist. Some of the large industrial sites are fragmented into smaller industrial sites. There are a high number of vacant properties in the precinct. The nature of the industrial sites also affects the availability of on-street parking within the precinct. The large number of small industrial sites has resulted in a large number of laybacks on each street. As a result, many on-street parking spaces have been removed, and as a consequence on-street parking is very limited. This is particularly noticeable in streets such as Chapel Street where parking has been provided as a hard stand in front of individual tenancies along the length of the street. This also leads to increased conflict between pedestrians and traffic as vehicles must cross pedestrian footpaths to access parking.

Amenity for pedestrians and cyclists in the precinct is poor, with little permeability, landscaping or public domain improvements within the precinct. Traffic is generally heavy, and conflicts can arise between vehicles, pedestrians and cyclists. Footpaths are narrow, often interrupted by laybacks and are in poor condition. Some efforts towards public domain improvement have been made along Addison Road.

The precinct is well serviced by public transport, with the eastern edge of the precinct being approximately 400 metres from Sydenham Station that will see a significant upgrade in capacity and frequency with the proposed Metro service. Victoria Road is also a major bus route for services to the City and other strategic centres.

The precinct contains one public open space area known as Wicks Park located on the eastern corner of Victoria Road and Sydenham Road. It contains passive and active

recreational facilities such as seating, children's play equipment and tennis courts. Other private recreational facilities contained within the precinct include the Marrickville Bowling and Recreation Club located on the western corner of Sydenham Road and Fitzroy Street.

The precinct does not contain any heritage conservation areas, however, it does contain a number of heritage items relating to the industrial and social history of the precinct. The range of industrial buildings in the precinct illustrates how industrial requirements have changed over time.

9.47.3 Desired Future Character

The vision for the Victoria Road Precinct is to support the long-term transition of the precinct into a vibrant, and sustainable mixed-use area, that provides interesting and appropriate new built forms in the precinct. The vision also includes public accessible spaces such as new footpaths, high-quality public spaces, improved connectivity and increased employment opportunities that will make the precinct a desirable place to work and live.

Victoria Road will be an active mixed-use corridor and the heart of the precinct, providing a connection between the established village centres of King Street, Newtown (to the north of the precinct) and Marrickville Road, Marrickville (to the south). The commercial corridor will achieve this through built form and design measures that will give a distinctive identity to the neighbourhood by providing a strong edge to the public domain.

New, higher density residential areas will be established in areas near existing residential areas and open space which will ensure dwellings are co-located near compatible uses with higher amenity.

Mixed uses will increase opportunities for residents to work locally and use local retail and leisure facilities. Active uses such as cafes, studios and small retail opportunities which line the streets and front open spaces will assist in increasing activity levels and pedestrian traffic in the area. Showrooms will enhance and develop the theme of home improvement offerings and complement existing retail centres. New opportunities will be created for commercial and office uses, particularly in the northern part of the precinct.

New shared zones and publicly accessible open space will improve permeability within the precinct and in certain locations, will become the focus of activity with non-residential uses on the ground floor. To further encourage pedestrian activity within the precinct, improvement to the streetscape, public domain landscaping and design of ground floor uses will provide a high-quality domain, encouraging greater pedestrian traffic and active ground floor uses, that open towards and spill out onto the public domain (such as café tables and chairs) and which results in a lively, attractive and activated streetscape. Active transport within the precinct will be encouraged through new on-road cycle routes and new publicly accessible open space within the precinct that will link with the existing cycle network within the surrounding area.

The desired future character for the precinct is:

1. To create an active commercial corridor of high-quality urban design along Victoria Road by encouraging active ground floor commercial uses such as cafes, small retail opportunities; boutique retail showrooms; and professional business spaces which are accessible to all persons.

2. To integrate urban and architectural design excellence and sustainability in the precinct to provide an environment that encourages sustainable living for all residents.
3. To enhance existing streets and incorporate new shared zones to encourage pedestrian activity.
4. To support the creation of new roads; shared zones; and vehicular accessways to enhance permeability; to increase the connectivity between each sub-precinct; and to provide opportunities for vehicular access to development sites, other than via direct access to Victoria and Sydenham Roads within the precinct.
5. To enhance the streetscape by incorporating sustainable design such as green streets and pathways throughout the precinct that form part of a wider green network connecting local activities, parks, public spaces and schools and which provide opportunities for incidental, casual social interaction amongst employee, residents and visitors.
6. To enable a broader mix of businesses that meets the requirements of the local employment profile and changing demographics of the Inner West Local Government Area.
7. To foster the transition of industrial uses to cleaner and modern, light and creative industries to improve the amenity of the precinct, while retaining employment opportunities.
8. To create a vibrant hub for Marrickville's creative industries (including live music venues) that complements the existing arts and cultural premises in the Chapel Street Sub-precinct and other parts of the precinct, as well as the proposed Sydenham Station Creative Hub in the adjacent precinct.
9. To create a liveable residential environment within the Victoria Road Precinct with inclusive access for all residents to the new Victoria Road Commercial Corridor, transport, and existing and new amenity areas.
10. To ensure that higher density developments, within the precinct, demonstrate good urban design and environmental sustainability for occupants of those developments.
11. To encourage the conversion of existing warehouses and other industrial buildings, where appropriate, and to support the creation of a hub within the Chapel Street Sub-precinct for home renovation and food production businesses, that promotes active or display ground floor uses such as ancillary showrooms and cafes.
12. To develop architectural design excellence for new buildings within the precinct which adopt design cues, where appropriate, from existing industrial buildings that are likely to be retained and re-used.
13. To provide significant housing and employment spaces for Sydney, within the precinct, while balancing the impacts on surrounding lower density residential properties.
14. To ensure the provision of a high level of residential amenity for development within the precinct and to mitigate any impacts on the residential amenity of adjoining and surrounding properties.
15. To ensure the interface between potential conflicting land uses are managed appropriately through design and siting measures.

16. To support the upgrade of existing parks and the provision of new publicly accessible open spaces, located on private land, to provide useful open space and landscaped areas.
17. To ensure development within the precinct is compatible with the operations of Sydney Airport.

9.47.4 Sub-Precincts

The precinct is divided into a number of sub-precincts as shown in *Figure 3: Sub-precincts*.

These sub-precincts are as follows:

1. Victoria Road Corridor Sub-precinct;
2. Timber Yards Sub-precinct;
3. Wicks Park Sub-precinct;
4. Chapel Street Sub-precinct;
5. Cook Road Sub-precinct; and
6. Fitzroy Street Sub-precinct.

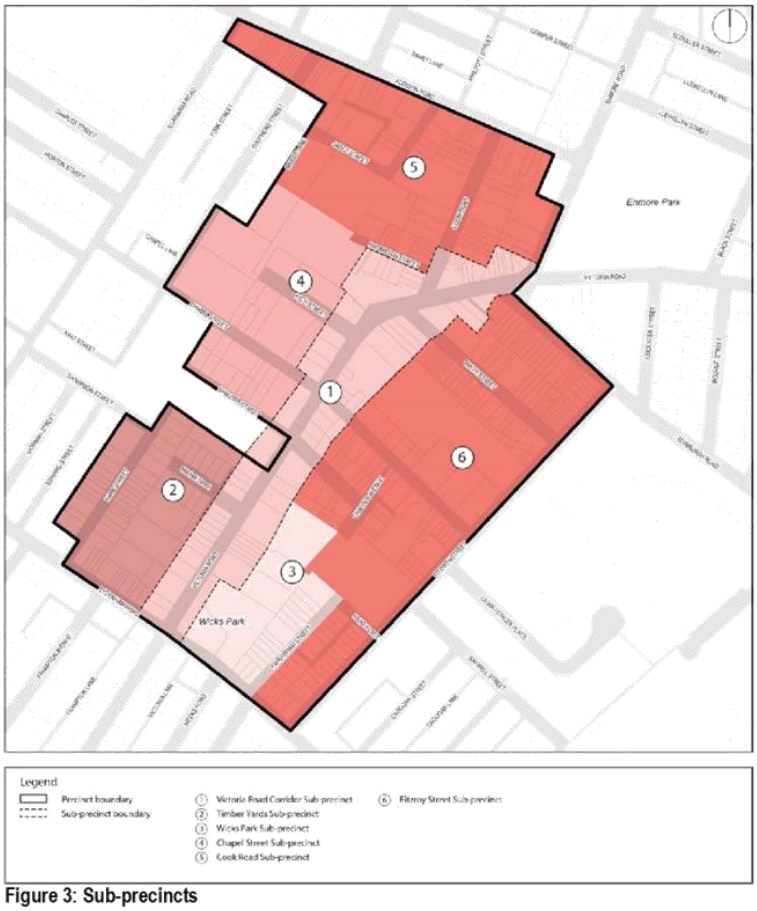


Figure 3: Sub-precincts

The development intent for each of these sub-precincts is outlined below.

1. **Victoria Road Corridor Sub-precinct**:

The Victoria Road Corridor Sub-precinct covers areas fronting Victoria Road. It is proposed to evolve into a main commercial spine comprising commercial, showroom, retail and other non-residential uses featuring well-designed built forms that have a sensitive interface with a high-quality public domain featuring new footpaths; additional pedestrian activation areas on private land located adjacent to existing footpaths; street trees; and other street furniture; such as bicycle hoops. This will create a pleasant and inviting environment to foster greater pedestrian and commercial activity along Victoria Road.

Areas south of Chalder Street within the sub-precinct will transition into a new vibrant mix of ground floor non-residential uses, and residential uses on the upper levels where noise affectation from the operation of Sydney Airport is less prevalent. Active uses such as cafes, studios and small retail opportunities which line the streets and face open spaces will assist in increasing activity levels and pedestrian traffic in the area. That mix of uses will increase opportunities for residents to work locally and use local retail and leisure facilities. Where noise-generation from existing flight paths across the precinct make it inappropriate for residential uses, non-sensitive uses such as office space, ground floor showrooms will be implemented in order to support activation along the corridor.

2. **Timber Yards Sub-precinct**:

The Timber Yards Sub-precinct will be a new residential area that will support the function of the Victoria Road Corridor Sub-precinct, interconnecting with the proposed mixed-use areas along Victoria Road. Built form will transition in height, being predominantly 3-7 storeys along the periphery with opportunities for taller buildings in the central area of the sub-precinct to minimise amenity impacts to adjoining low density residential areas. Siting and design measures will also be required for taller building elements to minimise residential amenity impacts from the operation of Sydney Airport.

Additional footpaths within the sub-precinct will add to the vibrancy of the area, increasing pedestrian activity and connections to the Victoria Road Corridor Sub-precinct.

3. **Wicks Park Sub-precinct**

The Wicks Park Sub-precinct will comprise of a mixed-use area that will be characterised by non-residential ground floors with residential above, whilst a business development zone will encourage new enterprises and creative uses along Faversham Street.

The sub-precinct will also support the function of the commercial corridor along Victoria Road while maximising amenity opportunities from Wicks Park. Streetscape and street network improvements will directly link to Victoria Road, enhancing the permeability of the sub-precinct, and supporting the ongoing function of the Victoria Road Commercial Corridor. The extension of Hans Place to Victoria Road will be a shared zone that will provide a key pedestrian link from the Creative Hub Precinct to the Victoria Road Commercial Corridor, with the opportunity for active uses such as cafes; studios; boutique showrooms; and smaller retail opportunities.

The sub-precinct will focus higher density residential along the northern edge of Wicks Park and maximise high visual amenity provided by the open space area. Whilst ground floor non-residential uses, with an interface to Wicks Park, will address this open space area in order to promote greater pedestrian amenity and activity. To minimise potential land use conflicts with the existing industrial area to the east, and noise and vibration affectation from the operation of Sydney Airport, transitional business development uses will be integrated along Faversham Street or within the ANEF 30 area.

4. **Chapel Street Sub-precinct**:

The Chapel Street Sub-precinct is a transitional area that will provide a buffer between the heavy industries to the east, and the commercial strip along Victoria Road. The sub-precinct will encourage modern forms of light industrial uses that will minimise the land use conflicts between surrounding uses. This will enable the sub-precinct to progressively evolve to cater for more modern employment industries whilst minimising potential land use conflicts.

5. **Cook Road Sub-precinct**:

The Cook Road Sub-precinct will continue to support a diverse range of uses including: light and heavy industrial uses; urban services; and entertainment and creative industries. Business and local retail uses are also located along Addison Road and Enmore Road. The desired future character for this sub-precinct aims to retain these uses, which will be important to support a variety of activities within the Victoria Road Precinct, especially as other sub-precincts begin to evolve. The established fig trees along Jabez Street and Meeks Lane will be maintained and enhanced to provide an essential urban tree canopy in this highly urbanised location.

6. **Fitzroy Street Sub-precinct**:

The Fitzroy Street Sub-precinct will continue to support the Inner West Council's industrial and urban services functions. Given the constraints of the sub-precinct, such as flooding and aircraft noise, the location will continue to support a range of industrial and warehouse land uses that will be compatible with the operations of Sydney Airport and Port Botany. The sub-precinct will also be a location to accommodate urban services that will support new residents of the Victoria Road Precinct and the wider local government area.

9.47.5 Indicative Masterplan

Development is to be generally consistent with the key elements in *Figure 4: Indicative Masterplan*.

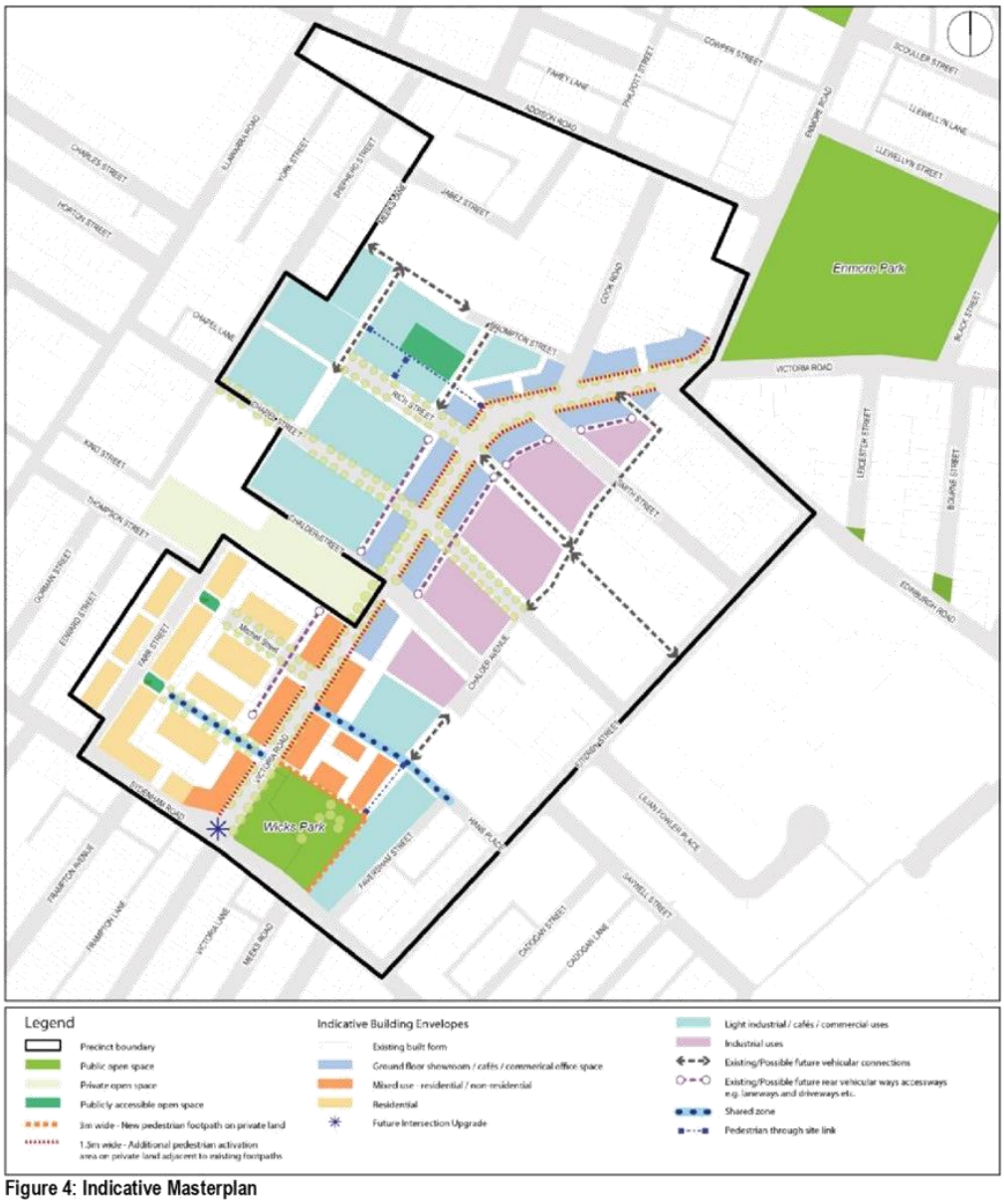


Figure 4: Indicative Masterplan

Objective

O1 To implement the *Indicative Masterplan* and create a vibrant mix of uses within a scale and density that complements surrounding centres and neighbourhoods and supports the desired future character of the Victoria Road Precinct.

Control

C1 Development within the precinct is to be undertaken generally in accordance with the *Indicative Masterplan* as shown in Figure 4.

NB *Variations to the location and layout of certain elements of this Indicative Masterplan such as proposed shared zones, vehicular accessways and building layouts may be considered by the consent authority.*

9.47.6 Form of Redevelopment Sites

9.47.6.1 *Background*

The precinct contains a diversity of lots in terms of their configuration and sizes which includes narrow, deep and wide lots. This range of configurations has the potential to create difficulties for the redevelopment of some individual lots within the precinct with regard to achieving:

- Acceptable amenity;
- Satisfactory vehicular access;
- Achieving the height of building for the Floor Space Ratio (FSR) for each land use zone; and
- Achieving the delivery of the required infrastructure on private lands identified within the *Indicative Masterplan*.

Although a mandated property amalgamation scheme does not form part of this DCP, objectives and controls have been included below, on the *form of redevelopment sites*, to ensure that the vision for the precinct can be achieved in the future.

9.47.6.2 *Form of Redevelopment Site Controls*

Objectives

O2 To support the implementation of the vision for the precinct by requiring, where necessary, the amalgamation of properties into larger redevelopment sites, on a case by case basis.To ensure redevelopment sites are of a suitable size and shape to enable high density residential and mixed use forms within the precinct can achieve high amenity and architectural qualityTo ensure that smaller allotments of land are not isolated leaving them unable to develop in accordance with the masterplan and provide for and deliver on key infrastructure required on private land.To maximise vehicular access to sites within the precinct that are susceptible to flooding and stormwater inundation.

Controls

C2 The redevelopment of lots shall be undertaken in a way that facilitates the implementation of the vision for the precinct. (In some cases this may necessitate the amalgamation of smaller properties).Any required amalgamation of sites shall be made in such as a way as to align with a fair and reasonable delivery of required infrastructure located on private

land as shown on the *Indicative Masterplan*. This includes the delivery of the proposed shared zones; proposed publicly accessible open space; new footpaths on private land; and the proposed additional pedestrian activation areas.

C3 Development must not be undertaken in a way that causes adjacent sites or any other lots in the locality to be isolated in any way and therefore unable to achieve the vision of the *Indicative Masterplan*.

C4 Where practicable, and with the exception of the proposed shared zones, development sites fronting Victoria and Sydenham Roads are required to obtain vehicular access to their properties, other than via these roads.

C5 Development sites bounded by Cook Road; Victoria and Enmore Roads are required to demonstrate how vehicular access (other than via Victoria and Enmore Roads) can be readily achieved as part of their redevelopment proposal for any allotment within this specific locality.

C6 Where the opportunity exists, preference is to be given to the location of new vehicular access points on redevelopment sites where their exposure to flood risk is minimised.

9.47.7 Movement Network

9.47.7.1 *General*

Objectives

O3 To encourage the use of public transport, walking and cycling and ensure streets achieve a balance between facilitating vehicle movement and promoting walking and cycling.

O4 To ensure new vehicular accessways e.g. laneways and shared zones are integrated with the surrounding street network, in particular, within the Timber Yards and Wicks Park Sub-precincts and establish a clear and legible street hierarchy interconnecting with Victoria Road.

O5 To ensure vehicular accessways and shared zones are designed and constructed to a high standard and provide a high level of comfort, amenity and safety.

O6 To support the delivery of identified road and intersection upgrades.

O7 To provide a comfortable and attractive environment for pedestrians and cyclists by enhancing pedestrian and cyclist connections to surrounding commercial precincts, including Addison Road and Marrickville Road.

O8 To ensure buildings and surrounding spaces and the public movement network is accessible to all persons including those with accessibility restrictions.

O9 To create shared zones that act as vibrant spaces.

O10 To improve connectivity and circulation within the precinct and to local activities, such as: parks, public spaces and schools.

O11 To ensure that any identified movement network works located on private land e.g. pedestrian activation areas; through site links; vehicular accessways and shared zones are delivered in conjunction with development applications for the redevelopment of the precinct.

O12 To provide for increased pedestrian activity on Victoria Road adjacent to the existing footpath area by requiring a 1.5 metre pedestrian activation area (setback for pedestrian use) on certain private land in the Victoria Road Corridor Sub – precinct.

Controls

C7 Development within the Victoria Road Precinct should be generally consistent with *Figure 5: Movement network plan and Table 1: Vehicular and pedestrian network characteristics.*

C8 Development within the precinct should also be consistent with any traffic and transport infrastructure works listed in *Appendix B – Marrickville Contributions Plan 2014 – Victoria Road Precinct, Marrickville (Sub-Plan).*

C9 Where required to be provided by this Development Control Plan (DCP), traffic and transport infrastructure and publicly accessible open space located on or adjacent* to private land is to be provided as part of the redevelopment of that land. **NB In this regard, development sites located adjacent to proposed publicly accessible open space will have a responsibility to share in the delivery of a fair and reasonable proportion, or all of the subject facility, depending on the circumstances of the case.*

C10 Council will consider alternative solutions to the delivery of each individual piece of infrastructure (publicly accessible open space; through site links; vehicular accessways; and shared zones) subject to:

i. No cost to Council; and

ii. Satisfying the objectives of the DCP.

C11 Development that includes publicly accessible open space on private land may be permitted to utilise these publicly accessible facilities towards the communal open space requirements of their development. However, no transfer of communal open space credits will be permitted between developments.

C12 The number of vehicle entry points per block should be minimised and located to maximise visual amenity within the public domain.

C13 Adequate separation between vehicular entry points is to be provided on development sites to minimise impact on streetscape design and pedestrian amenity.

C14 Where practicable, with the exception of the proposed shared zones, developments fronting Victoria Road and Sydenham Road should seek to have no vehicle access entry points from or to Victoria Road and Sydenham Road.

C15 Any pedestrian activation area or new footpaths located on private land that applicants may seek to dedicate to Council in the future, shall have no basements encroaching upon that portion of land.

C16 Street furniture is to be provided and includes a high-quality, durable and co-ordinated selection of:

i. paving;

ii. seating;

iii. rubbish bins; and

iv. signage.

C17 Pedestrian paths:

i. are to be provided on both sides of existing and proposed streets identified in *Figure 5: Movement network map*;

ii. are to be clearly distinguished from vehicle accessways;

iii. are to be designed to maximise safety for pedestrians within shared zones; and

iv. are well-lit to safety standards.

C18 Safe and legible cycle routes are to be incorporated throughout the precinct which connect to existing cycle routes within the surrounding area.

Table 1: Vehicular and Pedestrian Network Characteristics

Type	Reservation Width	Lane Width		Footpath Zone / Pedestrian Lane	Street Tree Planting (Green link)
		Traffic Lane	Parking		
Victoria Road	21m	6m (two-way)	3m	3m	1.5m
Local street	11.5m - 20.5m	6m - 9.5m (two-way)	3m	2.5m	1.5m
Shared zone	6m - 18m	6m	3m	1-3m	N/A
Laneway	6m – 12m*	6m – 12m*	N/A	N/A	N/A
Through site link	5m	N/A	N/A	5m	N/A

***NB** *The wider laneway option will only be permitted/supported where it can be established that a wider laneway is in keeping with the vision and urban design objectives for the precinct, contained within this DCP.*

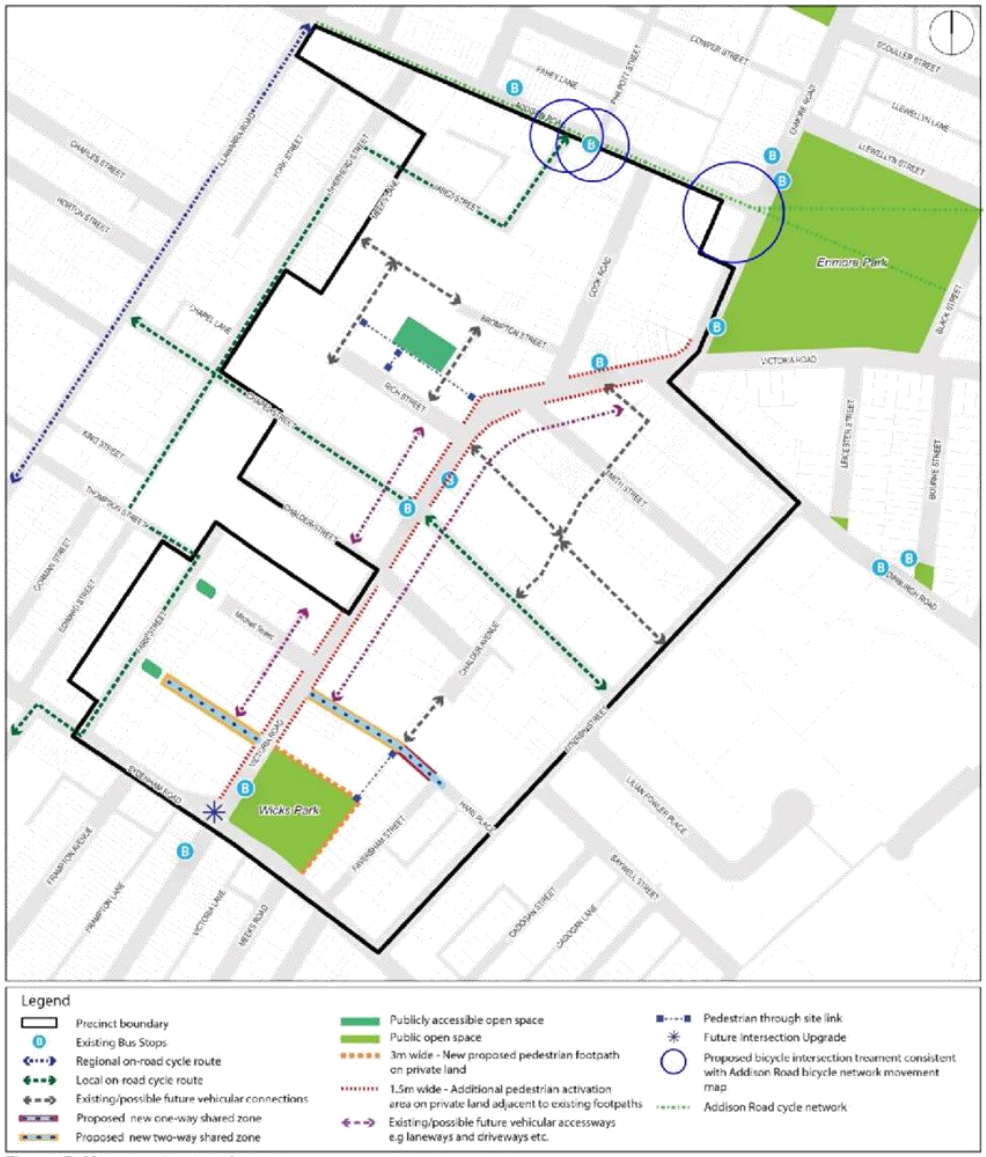


Figure 5: Movement network map

9.47.7.2 *Shared zones and traffic infrastructure*

Objectives

O13	To create a pedestrian friendly space in the form of shared zones within the Timber Yards and Wicks Park Sub-precincts.
O14	To provide opportunities for street activities and leisure (such as outdoor café spaces) at the end of the shared space towards Victoria Road.
O15	To ensure that the street network provides a high level of amenity and safety for all users.

O16 To support the creation of, where practicable, alternative vehicular access to properties fronting Victoria Road and Sydenham Road other than via direct driveway access to these roads within the precinct.

Controls

C19 The location of the proposed new shared zones is to be generally in accordance with the Figure 6: *Movement network map*.

C20 Shared zones are to generally conform with Table 2: *Shared zone characteristics below:*

Table 2: Shared zone characteristics

Type	Key Characteristics	Guidelines
Shared zone	A driver must give way to any pedestrian in the zone. Traffic loads are generally less than 500 vehicles per day. Speed limit is 10km/h.	No definition between pedestrian and vehicular zone. No kerbline. Change of paving indicates parking areas. Low traffic volumes, high pedestrian activity. Prioritise pedestrian and cycle movements and to facilitate local vehicular access. Active ground floor uses open towards/spill out onto the zone (such as cafe tables and chairs). Greater flexibility for use of road space. Defined loading and parking zones. Ability to introduce street trees. Where shared zones are proposed on a cul-de-sac, a turning point is to be provided for adequate vehicular movement.

9.47.7.3 *Green links*

Objectives

O17 To integrate green links that primarily serve a movement function, but which also improve environmental performance, visual amenity and comfort of the public domain.

O18 To create green links and pathways that form part of a wider green network that connects commercial areas, parks, public spaces and schools.

O19 To provide a public domain that supports a habitat for local wildlife, reduces the urban heat island effect, manages stormwater and makes active transport more attractive.

O20 To improve permeability and connections between key areas within the precinct.

Controls

C21 Development is to incorporate green links generally in accordance with *Table 3: Green link characteristics.*

Table 3: Green link characteristics

Type	Guidelines
Green links	Footpaths are to allow adequate space for the planting of street trees. New street trees are aligned along existing and proposed footpaths and shared zones. Street trees are to be planted in a co-ordinated, regularly spaced manner. The proposed species of street trees are to be in accordance with Council's Street Tree Master Plan. Deep soil verges are to be provided as part of any street tree planting for infiltration of stormwater. Street trees provide shade and enhance the level of thermal comfort within the public domain.

9.47.7.4 *Indicative street sections*

The following street sections indicate the height and separation of buildings and their possible uses under the masterplan. The building forms depicted in the sections illustrate the intended future-built form outcomes for each street while acknowledging the existing character of the area. Building heights align with the relevant Local Environmental Plan (LEP) height limits for the precinct. It is noted that in some instances building heights shown in Figures 6-14 may not be reached, due to the need to comply with other planning requirements.

(*See Figure 6 – Indicative street sections – next page*)

Figure 6: Indicative street section locations – Refer also to Figures 7-14 below

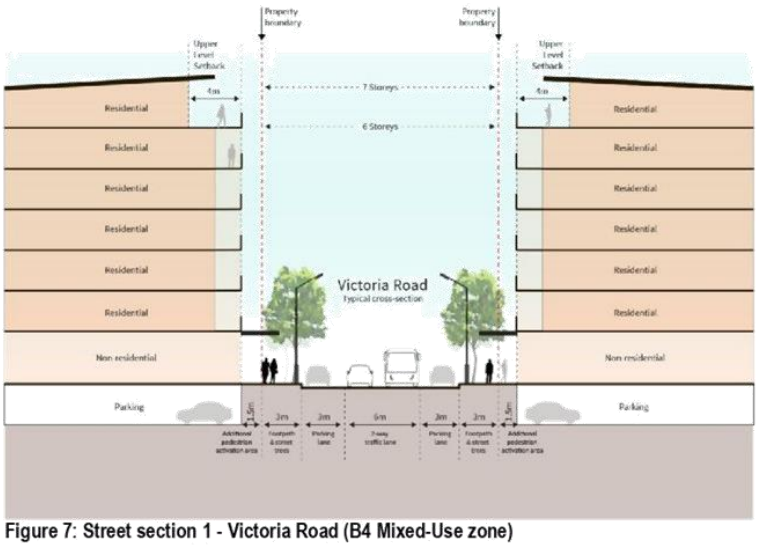


Figure 7: Street section 1 - Victoria Road (B4 Mixed-Use zone)

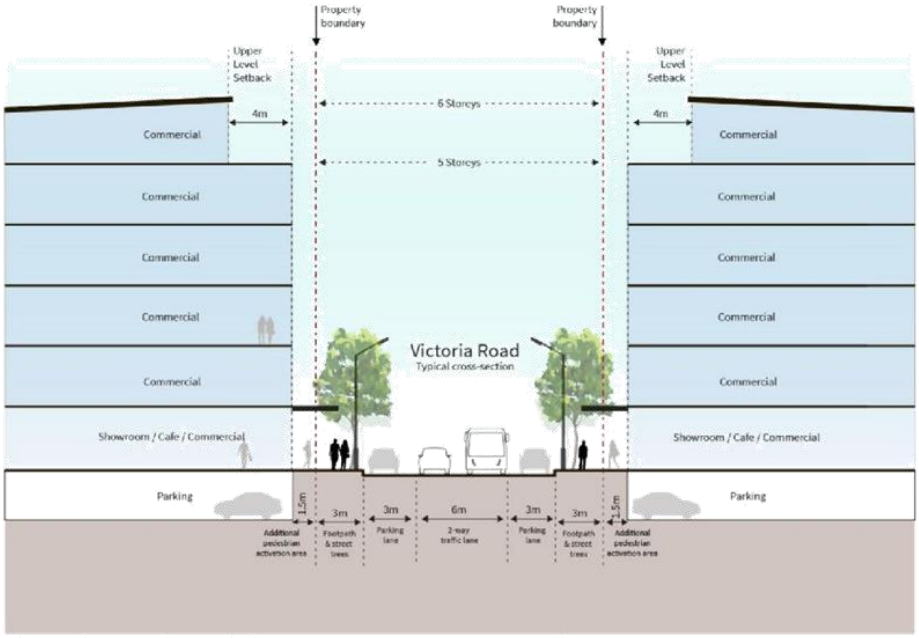


Figure 8: Street section 2 - Victoria Road (B5 Business Development zone)

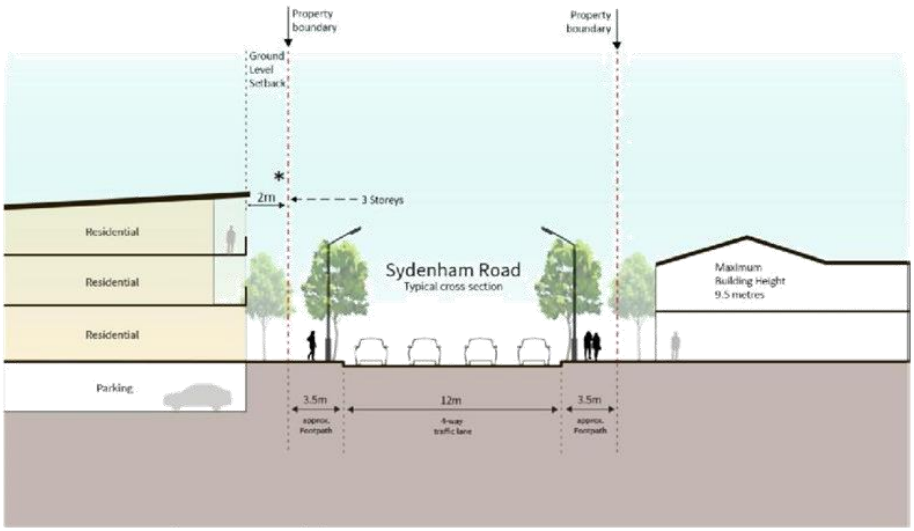


Figure 9: Street section 3 - Sydenham Road

***NB** *2 metre front setback or existing predominant setback – refer also to Figure 16 – Ground and upper level setbacks map.*

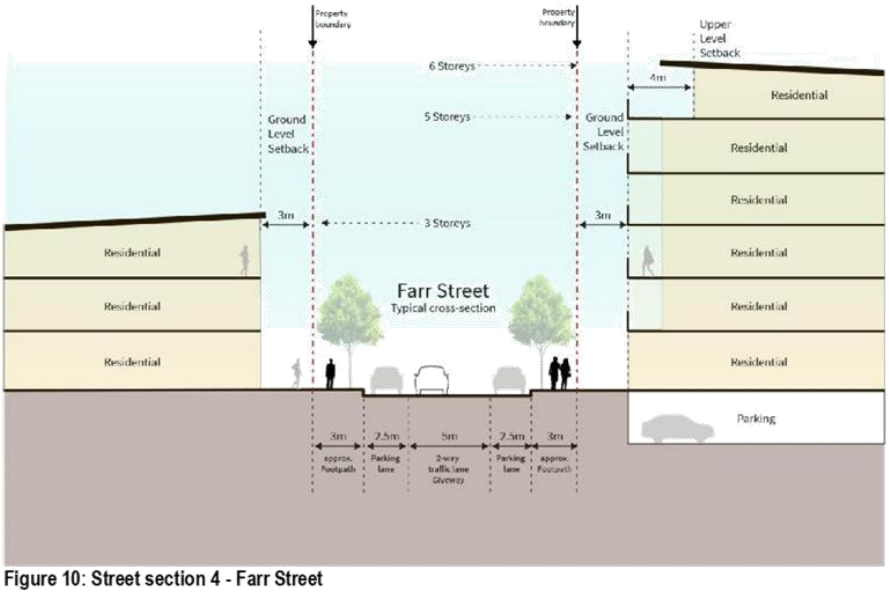


Figure 10: Street section 4 - Farr Street

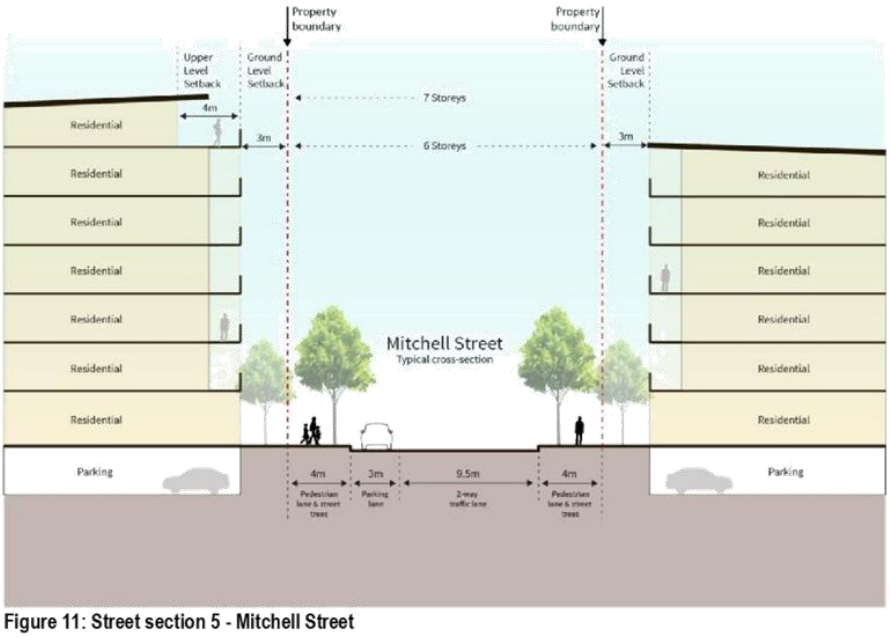


Figure 11: Street section 5 - Mitchell Street

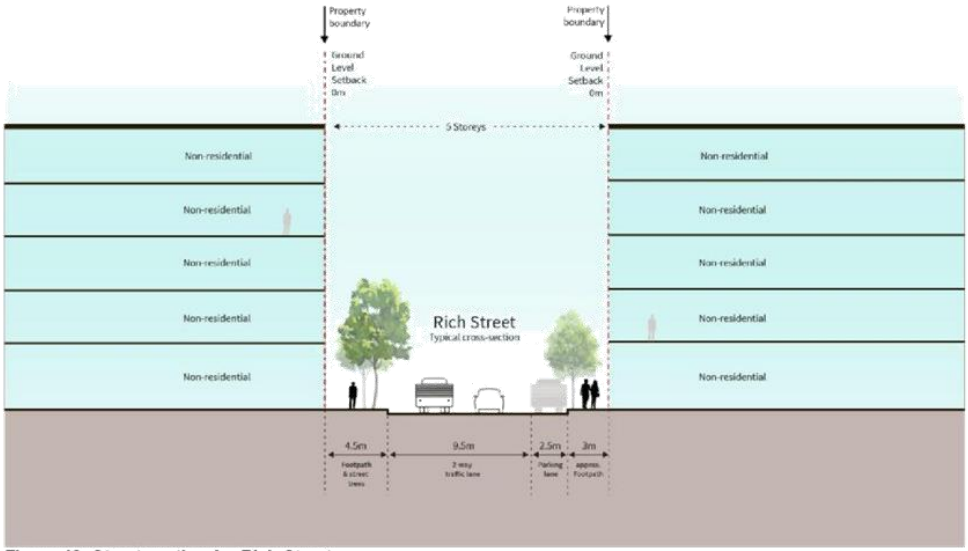


Figure 12: Street section 6 – Rich Street

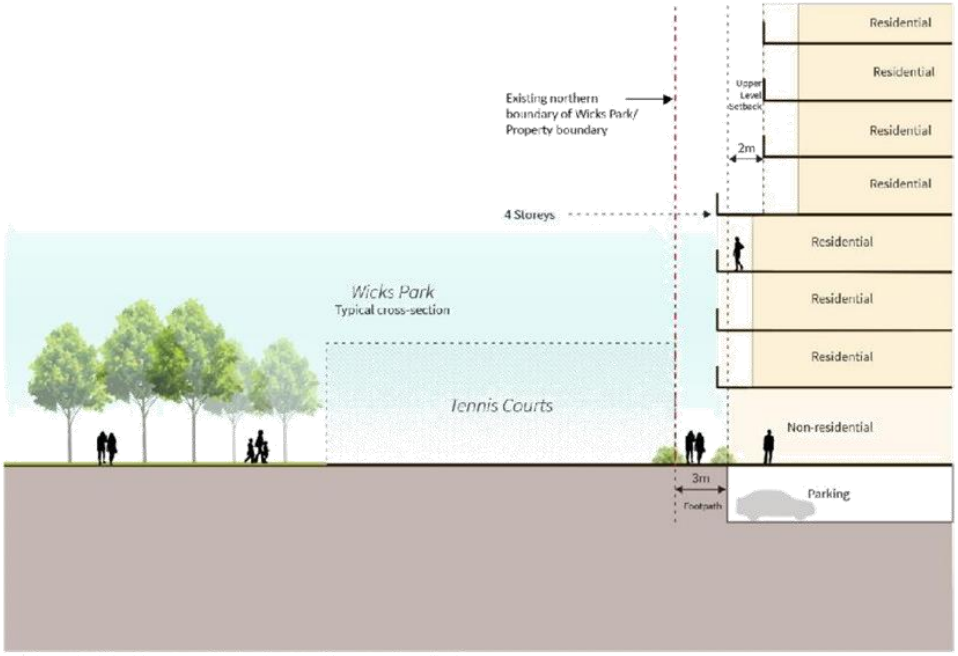


Figure 13: Street section 7 – Wicks Park northern interface

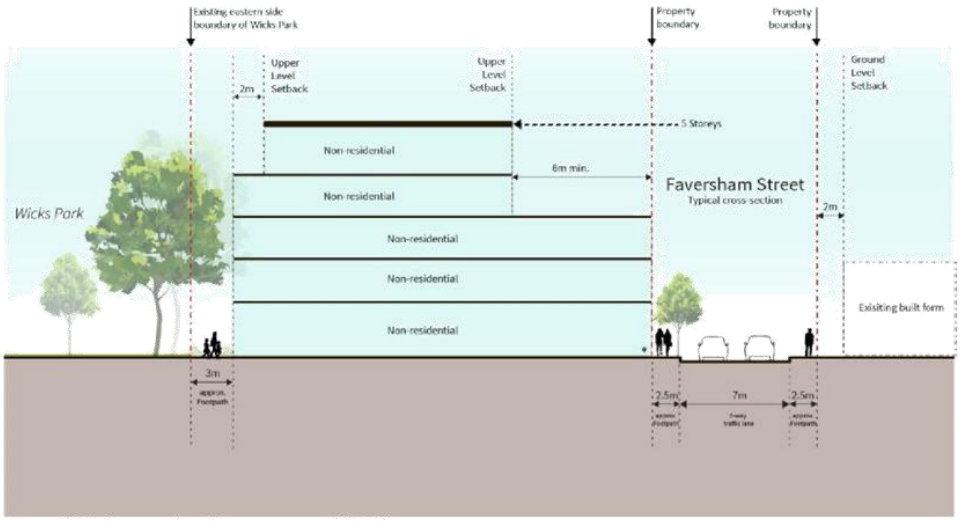


Figure 14: Street section 8 – Faversham Street

***NB** *For applicable setbacks from the street frontage refer to Figure 16 – Ground and upper level setbacks map.*

9.47.8 Publicly Accessible Open Space Network

Objectives

O21	To provide a high level of physical and visual access to existing and proposed publicly accessible open space areas within the precinct.
O22	To increase the urban tree canopy of the existing street network; and the proposed shared zone and vehicular accessway e.g. laneway network.
O23	To provide functional open spaces for residents within the precinct.
O24	To create active, attractive and functional publicly accessible open space areas.
O25	To provide additional publicly accessible open space within the Chapel Street and Timber Yards Sub-precincts; and other parts of the precinct as they are redeveloped.

Controls

C22	Publicly accessible open space shall be provided in accordance with the *Figure 4: Indicative Masterplan.*
C23	Green links, which primarily cater for vehicle, pedestrian and cyclist movement but also provide an open space function, are to be provided generally in accordance with *Part 9.47.7.3 Green links.*
C24	Existing and new open space areas are to be generally consistent with the requirements and guidelines set out in *Table 5: Publicly accessible open space characteristics**.

Table 5: Publicly accessible open space characteristics*

Type	Requirements	Guidelines
Publicly Accessible Open Space	Minimum area of 700 sqm. Primarily for informal passive recreation	Located at the end of the shared zone area and Mitchell Street within the Timber Yards Sub-precinct. A privately owned and maintained publicly accessible open space area. Public access to be available on a 24-hour, 7-days per week basis. Has a predominantly open, natural character, with adequate soft landscaping features. Provides a visual and physical link between the shared zone, Mitchell Street and Farr Street. Pedestrian pathways are located at the periphery to maximise useability for passive recreation and maintain usability for passive recreation and maintain an open landscape character. Provide deep soil garden beds and grassed areas. Incorporate high quality embellishments, including seating, bins and lighting.
Rich Street Publicly Accessible Open Space	Publicly accessible open space. Minimum area of 1,200 sqm. Primarily for informal passive recreation (minimum dimensions: L - 40m, W - 30m).	A privately owned and maintained publicly accessible open space area. Public access to be available on a 24-hour, 7-days per week basis. Contains a large central lawn and hard-stand plaza area that support active and passive recreational opportunities. Outdoor spaces will have the capacity to accommodate a range of potential future events, including community events associated with the precinct such as an outdoor cinema; occasional markets; and community festivals. New pathways provide access from Brompton Street, Victoria Road and Rich Street.

***NB** *Other redevelopment sites within the precinct are also likely to contain additional publicly accessible open space which will likely have characteristics which differ from those expressed above. These new spaces will be considered on their own merits are not intended to be restricted by the information provided in Table 5 above.*

9.47.9 Stormwater Management

Objectives

O26 Stormwater management is integrated within the layout and design of the precinct without compromising the visual attractiveness of the public domain.

O27 Streets and public open spaces are to perform a secondary stormwater management function in a manner that does not compromise their core functions for movement and recreation.

O28 To ensure that stormwater management is appropriate to the site and to the proposed development for the protection of property and life from any adverse stormwater impacts.

O29 Stormwater management results in the effective treatment and disposal of stormwater.

O30 To ensure redevelopment sites give consideration to their potential downstream stormwater impacts.

Controls

C25 Proposed open spaces (including pocket parks) and landscaped areas are to incorporate deep soil zones for infiltration purposes and to reduce stormwater runoff.

C26 Deep soil verges are to be provided as part of any street tree planting for stormwater infiltration purposes.

C27 All drainage systems within the precinct are to be upgraded to 5% AEP (Annual Exceedance Probability) flood flow capacity as redevelopment occurs.

C28 Overland flow paths shall be provided over all Council or Sydney Water drainage systems to convey up to 1% AEP flood flows.

C29 All existing blocked overland flow paths must be opened and cleared.

C30 Proposed development within the precinct is to be in accordance with Section 2.17 Water Sensitive Urban Design, Section 2.22 Flood Management, and Section 2.25 Stormwater Management, of this DCP, and the specific stormwater, flooding, and water sensitive urban design (WSUD) provisions in this part of the DCP.

C31 Redevelopment sites at 1-19 Rich Street and 114-118 Victoria Road, Marrickville are to include a site specific water design solution that ensures additional stormwater/flood waters, during storm/flooding events, are retained, in accordance with Sydney Water requirements.

C32 Any proposed development must not result in a net loss of existing flood storage within the development site.

C33 On properties with a low flood hazard classification* for the 1% AEP flood event, basement (below natural ground level) car parking must have all access and potential water entry points above the Flood Planning Level (1% AEP flood level plus 0.5m freeboard), and a clearly signposted flood free pedestrian evacuation route provided from the basement area separate to the vehicular access ramps. For basement car parking in properties affected by High Hazard flooding* in the 1% AEP flood event, all access and potential water entry points are to be above the Probable Maximum Flood Level or Flood Planning Level (1% AEP flood level plus 0.5m freeboard), whichever is the higher.

***NB** *For further information concerning flood hazard classifications within the precinct, refer to Controls C1 and C2 of Section 2.22.5 of Part 2.22 - 'Flood Management', in this DCP, which require the completion of a Flood Risk Management Report for development sites, utilising the most current flood hazard information from Council.*

9.47.10 Water Sensitive Urban Design (WSUD)

Objectives

O31 To facilitate the revitalisation of the Sydney Water canal corridor, north of Rich Street, as a pedestrian thoroughfare, subject to Sydney Water's requirements.

O32 To integrate the revitalisation program for the canal corridor with the overall movement network within the precinct and beyond.

Control

C34 Consideration to be given to the implementation of interpretive signage on the history of the Sydney Water Canal, in this location.

C35 Development is to not obstruct or hinder public access to the interpretive signage on the history of the Sydney Water Canal, in this location.

C36 In addition to the requirements in *Section 2.17 Water Sensitive Urban Design* of this DCP, any development is to be sensitive to the pedestrianisation of the canal, subject to any requirements of Sydney Water.

9.47.11 Built Form

9.47.11.1 *Building height*

Maximum building heights within this precinct have been shown by number of storeys (Figure 15) and must be read in conjunction with the maximum building heights shown on the *Marrickville Local Environmental Plan 2011* (*as amended*) (*MLEP 2011*) height of buildings map and the indicative street sections in *Section 9.47.7.4 Indicative street sections*.

Objectives

O33 Building heights visually reinforce Victoria Road's role as a commercial corridor.

O34 Building heights are applied so as to ensure high levels of amenity, including enabling appropriate levels of solar access to key areas of the public domain such as Wicks Park.

O35 Building heights contribute to the creation of a high density, urban neighbourhood character compatible with the precinct's inner city, transit accessible location.

O36 Building heights are varied through the precinct to create a visually interesting urban form and skyline.

O37 Building heights are consistent with the operational requirements of the Sydney Airport.

O38 Building heights encourage a height and scale that transition toward surrounding lower density areas.

Controls

C37 Building height is in accordance with the relevant building heights map within MLEP 2011.

C38 Development is to be generally in accordance with *Figure 15: Building heights map*.*

NB ** Maximum building height per block is set by Marrickville LEP 2011. Figure 15 is intended to provide for variation of building height within each block to achieve the objectives of this part, and in particular diversity of building height. This means that not all buildings within a block will be able to be built to the maximum*

height in the LEP. The consent authority is to apply Figure 15 in a flexible way having regard to the objectives of this part.

C39 Buildings have a consistent street wall height along Victoria Road.

C40 Building height must be read in conjunction with the indicative street sections for the relevant sub- precinct.

C41 Building height ensures 50% of the total area of Wicks Park receives a minimum of 3 hours of direct sunlight from 9:00am to 3:00pm on 21 June.

C42 Building height implements an appropriate transition of height to existing lower density residential areas.

C43 Buildings that address Sydenham Road are intended to generally be three-storeys in height, except on the corner of Victoria Road, where an increase in height is acceptable as part of the Victoria Road Corridor Sub-precinct.

C44 Taller buildings are to be adjacent to Wicks Park where there is greater residential amenity and views.

C45 Building separation distances for the Wicks Park and Timber Yards Sub-precinct shall comply with the relevant requirements of the NSW Apartment Design Guide or any future, relevant, replacement State planning controls.

C46 Where a proposed development maximises the Local Environmental Plan (LEP) floor space ratio for the site, but does not achieve the maximum building height set out in Figure 15 and MLEP11, the relevant MLEP11 floor space ratio control shall prevail.

(*See Figure 15 – Building heights map – next page*)

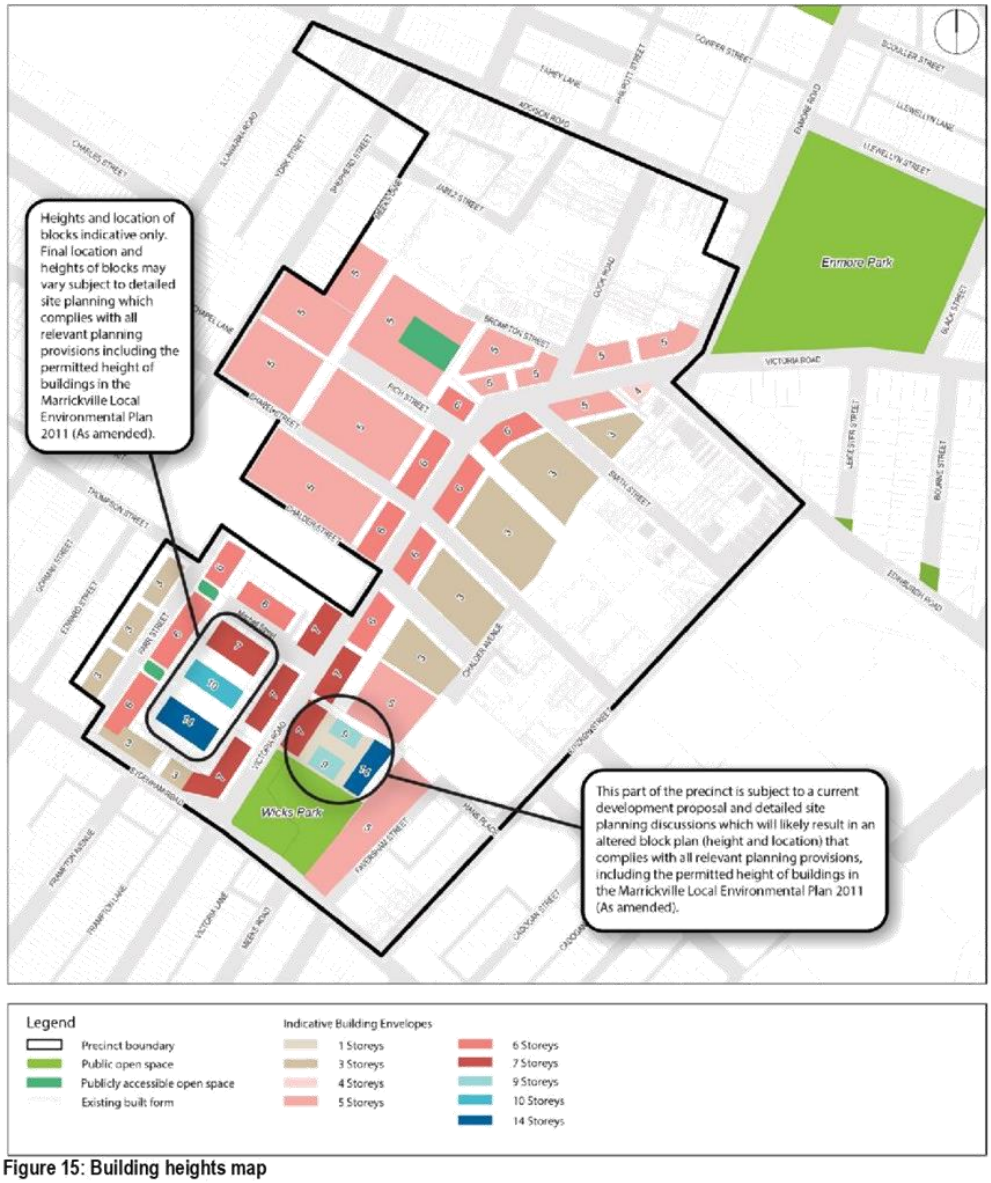


Figure 15: Building heights map

9.47.11.2 *Building form and design*

Objectives

O39	To create a physical street edge that clearly defines Victoria Road.
O40	To ensure the design of buildings maximise visual interest and minimise the overall scale and bulk.
O41	To ensure orientation of buildings address the street to maximise engagement with the public domain.
O42	To ensure development defines the proposed street pattern within the precinct.
O43	To ensure buildings are designed to minimise loss of acoustic amenity from aircraft operation and other potential noise sources within the precinct.
O44	To encourage the provision of a central courtyard within the defined street blocks as a shared communal open space.
O45	To ensure the design of ground level non-residential components within the Victoria Road Corridor, Timber Yards and Wicks Park Sub-precincts contributes to the streetscape and public domain with high-quality architecture and materials and finishes to encourage greater pedestrian activity within the public domain.
O46	To consider any potential amenity issues arising from overlooking onto *Marrickville Public School* for developments within the vicinity of this school.

Controls New development is to address existing and proposed streets, shared zones and publicly accessible open space.

C47	Notwithstanding control C47 below, consideration shall be given for developments located near *Marrickville Public School* to investigate any potential amenity impacts for the school patrons arising from overlooking onto the school's playgrounds as part of their design process, which is also to be addressed within their accompanying statement of environmental effects.
C48	Buildings are to be designed to maximise apartment orientation to adjoining private or public open spaces to optimise outlooks and views to areas of high amenity.
C49	Buildings are to incorporate design measures to visually break long building facades through façade modulation; and potential physical and visual breaks in the lengths of buildings on large redevelopment sites.
C50	Building facades are to be articulated within a cohesive overall design composition that incorporates measures such as: i. recessed and / or projecting balconies; ii. windows and other openings; iii. sun control devices such as eaves, louvres and screens; iv. privacy screens; and v. blades or fins.
C51	Buildings are to be designed in accordance with the provisions of *Schedule 1: Victoria Road Precinct Noise Policy*.

C52 High-quality communal open space is to be provided and designed to be usable and appealing to maximise activity, and to provide pleasant views for residents.

C53 The number of individual entries for ground floor apartments that are facing the public domain are to be maximised.

C54 The length of building entry foyers is to be minimised.

C55 Buildings are to be elongated and aligned with the indicative street blocks fronting Victoria Road to reinforce the commercial corridor.

C56 Building design of mixed-use development along Victoria Road must avoid long sections of blanks walls in order to positively contribute to the public domain.

C57 For mixed-use development within the Wicks Park Sub-precinct:

i. the siting and orientation of taller buildings within the sub-precinct must ensure that Wicks Park receives sufficient solar access in accordance with Section 9.47.11.1 Building Heights; and

ii. buildings adjacent to Wicks Park are to have non-residential uses addressing Wicks Park for the full extent of the ground floor.

C58 For showroom development:

i. an active street front is to be provided through glazed retail showrooms in order to establish a link between the public and private domain;

ii. development is to provide a minimum ceiling height of 3.5 metres on the ground floor; and

iii. development is to provide flexible open plan areas on the ground floor.

9.47.11.3 *Setbacks*

Objectives

O47 To ensure that buildings along Victoria Road Corridor Sub-precinct create a coherent, human scale street wall.

O48 To provide appropriate visual massing and amenity for residential dwellings and the public domain.

O49 To ensure that development retains a high level of residential amenity, including allowing for appropriate public domain interfaces and solar and daylight access to dwellings and the public domain.

O50 To ensure an adequate area is provided to support landscaping features along the streetscape.

O51 To ensure consideration is given to the corresponding setback controls within other parts of the *Marrickville Development Control Plan 2011*.

O52 To minimise visual bulk and scale of future development from the public domain.

Controls

C59 The design of new buildings within the precinct are to comply with the ground and upper level setbacks outlined in *Figure 16: Ground and upper level setbacks map*.

C60 Setbacks at the ground floor of residential streets are to facilitate the delivery of private outdoor recreation spaces which provide appropriate transitional spaces between the private and public domains.

C61 Taller building elements are to be setback from lower building elements to reduce the appearance of building bulk and scale and enable solar access to the public domain.

C62 Roof lines may project into the upper level setback zone by 2 metres.

C63 For buildings that address Wicks Park, balconies may project into the setback zone by 0.5 metres, provided that it achieves an articulated building facade within a cohesive overall design composition.

C64 Setbacks must be read in conjunction with the indicative street sections in *Section 9.47.7.4 Indicative street sections* and with other relevant setback requirements within *Part 4.2 - Residential Development – Multi – Dwelling Housing and Residential Flat Buildings; Part 5 – Commercial and Mixed Use Development; and where relevant Part 6 – Industrial Development.*

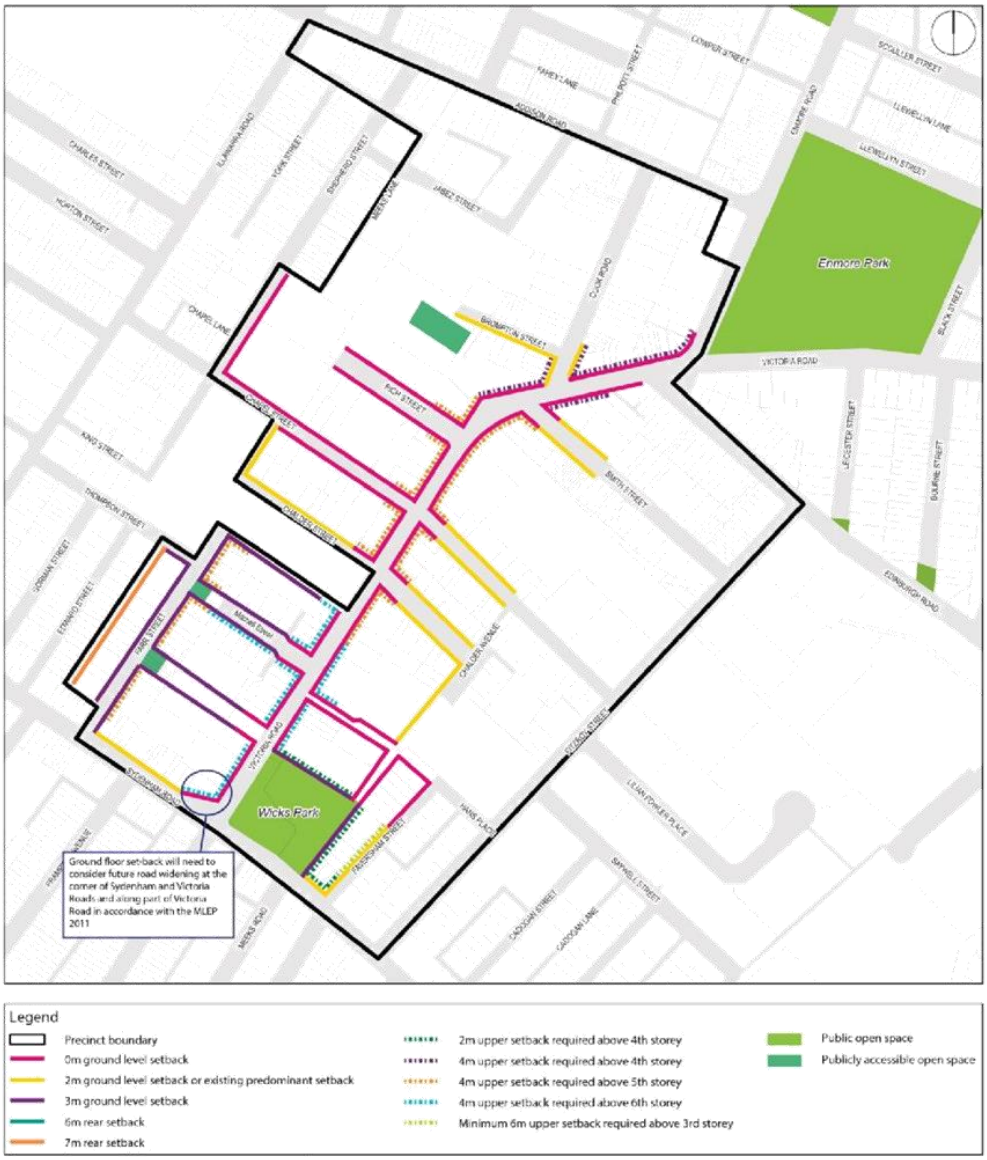


Figure 16: Ground and upper level setbacks map

9.47.11.4 *Active frontages*

Objectives

O53 To encourage active ground floor uses comprising a mix of non-residential uses to enhance activity along pedestrian and vehicular thoroughfares within the precinct.

O54 To encourage greater pedestrian activity along Victoria Road in order to reinforce its role as a commercial corridor.

O55 To promote the activation of existing and proposed pedestrian and vehicular thoroughfares with cafes, studios, boutique showrooms and smaller retail tenancies.

O56 To ensure active frontages make a positive contribution to the public domain and streetscape.

Controls

C65 The location of active land uses and frontages at ground level is to be implemented generally in accordance with *Figure 17: Suggested active frontages* and with regard to the exceptions specifically noted on Figure 17.

C66 Buildings that require active frontages are to be built to the street alignment.

C67 Active frontages are to be designed with the ground floor level at the same level as the footpath.

C68 Active frontages are to incorporate large areas of transparent glazing or other openings that enable clear sightlines between the public domain and internal areas, in particular those with high levels of activity such as reception, seating and dining areas.

C69 Residential foyer entries are to be minimised along active frontages.

C70 Development is to provide fixed/retractable awnings (or suitable equivalents) that are integrated with the overall design of the building along areas that have active ground floor uses.

C71 For development along the Hans Place extension and the existing/potential altered Chalder Avenue extension:

i. non-active ground floor uses may be acceptable if zoned B5 Business Development under Marrickville LEP 2011;

ii. Notwithstanding the contents of Section 9.47.7.4, fixed/retractable awnings (or suitable equivalents) are to be provided along active street frontages.

Figure 17: Suggested active frontages

9.47.12 Other Infrastructure

Objective

O57	To provide high levels of visual and aesthetic amenity within the precinct.
O58	To ensure service reliability and enhance efficiency in the provision of utilities within the precinct.
O59	To ensure enhanced levels of public safety within the precinct

Control

C71 All powerlines and utilities (including telecommunication infrastructure) are to be located underground in the redevelopment of the precinct.

9.47.13 Operation of Sydney Airport

Objective

O60 To ensure development and alterations and additions to existing buildings do not adversely affect the ongoing operation of Sydney Airport or its ability to grow in accordance with the Airport's approved masterplan.

Controls

C73 New development, alterations and additions must not incorporate reflective materials as part of the walls, windows or roofing structure.

C74 The maximum building height shall not exceed the LEP maximum heights, which should be measured in terms of Reduced Levels (RLs), not vertical distance from ground level (existing).

C75 The maximum height of any building shall not exceed the OLS, PAN-OPS, or PAPI surfaces for the approach to Sydney Airport under any circumstances:

i. For further advice on whether a building would penetrate the OLS, details of the proposed building, including elevation diagrams, building footprint set out using MGA94 co-ordinates, the location of the tallest elements including lift overruns, lightning masts etc, set out using MGA94 co-ordinates would need to be provided to make an accurate assessment;

ii. Where construction cranes are required to operate at a height greater than that of the proposed development, approval for the operation of the construction equipment (i.e. cranes) is required to be obtained prior to commencement of construction.

C76 Any building proposed greater than 15.24 metres in height shall be referred to Sydney Airport for comment.

9.47.14 Noise and Vibration

Objectives

O61 To ensure development does not unreasonably impact on the amenity of residential and other sensitive land uses by way of noise or vibration.

O62 To design and orientate residential development and alterations and additions to existing residential buildings in such a way to ensure adequate internal acoustic and visual privacy for occupants.

O63 To maximise the provision of information to residents regarding aircraft noise, and existing/future live music and entertainment venue noise.

Control

C77 New development is to be in accordance with *Schedule 1: Victoria Road Precinct Noise Policy*.

9.47.15 Schedule 1 – Victoria Road Precinct Noise Policy

This schedule outlines the objectives, design principles and design solutions relating to noise impacts on development proposals within the Victoria Road Precinct. Proponents for all development proposals within the Victoria Road Precinct are to be designed in accordance with the principles and design solutions set out below. Development applications are to be accompanied by adequate supporting technical information that demonstrates how the proposed development has been designed to meet the requirements of this Policy.

Objectives

O64 To ensure that all development in the precinct is designed to achieve an appropriate level of amenity for its occupants taking into consideration its land use.

O65 To ensure that all residential development satisfies key necessary design criteria relating to building siting, design, building materials and facilities.

O66 To ensure that development within the precinct complies with Australian Standard AS 2021:2015.

O67 To ensure that future residents within the precinct are appropriately informed about aircraft noise and existing/future live music and entertainment venues within the precinct.

O68 To protect the ongoing operation of Sydney Airport and minimise the potential for reverse impacts from development within the precinct.

9.47.15.1 *Building Design*

Effective mitigation against potential noise intrusions (aircraft noise and potential exposure from existing live music and entertainment venues in the precinct) begins with the fundamentals of design. Effective and thoughtful use of site layout, orientation, internal building configuration and apartment design can significantly assist with laying the foundations to ensuring high-quality amenity is achieved for future occupants of buildings. Table 1.1 sets out the design principles and solutions for achieving effective noise attenuation design for development within the Victoria Road Precinct. Based upon the proximity of developments to potential noise intrusion, any additional requirements/treatments will be determined through the Development Application process.

Table 1.1: Building Design

Design Principles		Design Solution	
DP1	To minimise the level of noise exposure to future development.	The following design solutions are to be achieved for development:	
DP2	To ensure buildings are designed to respond to site specific aircraft noise constraints and the location/proximity of existing live music and entertainment venues, taking into consideration: site layout; building orientation; building configuration; and apartment design.	DS1	The site layout and orientation of buildings must be designed to minimise potential noise exposure from aircraft, and other potential noise sources e.g. existing live music and entertainment venues in the precinct.

Design Principles		Design Solution	
DP3	To ensure that occupants of buildings, particularly residents of residential building, are afforded an appropriate level of internal amenity in accordance with AS 2021.	DS2	The internal configuration of residential buildings are to be designed to minimise the number of apartments facing toward the flight path, or other potential intrusive noise sources.
DP4	To ensure that all dwellings are provided with adequate and useable private amenity space.	DS3	Apartment layouts are to be configured so that less sensitive non-habitable rooms and spaces (e.g. bathrooms, kitchens, laundries, hallways) are positioned along facades that have a higher level of noise exposure.
DP5	To allow flexibility in the balance between ventilation and sound insulation taking into consideration the precinct specific constraints.	DS4	Building facades are to be designed to minimise potential acoustic impacts (e.g. double brick cavity design will be more appropriate in the Victoria Road Precinct than extensive glazed facades), whilst still achieving a high-quality design outcome.
		DS5	Building rooftops are to be designed to mitigate sound exposure to the internal components of the building (e.g. pitched tiled roof with insulation would be more appropriate than a flat sheet metal roof without insulation).
		DS6	Where winter gardens are provided in place of balconies, they must be designed with an operable glazing system (e.g. louvres or sliding screens) that allows for natural ventilation if desired by the occupier.

9.47.15.2 *Building Materials and Treatments*

Use of the correct building materials is essential to ensure the internal acoustic environment for development within the Victoria Road Precinct is conducive with its intended land use and achieves the necessary internal noise goals in accordance with AS 2021. The following section sets out the relevant internal noise goals, outlines the acoustic performance requirement of key building elements and provides illustrative examples on how an apartment/building might be designed to satisfy these requirements.

Table 1.2: Internal noise requirements

Design Principles		Design Solution		
DP1	To ensure that all buildings are designed with materials and treatments that appropriately insulate against aircraft noise to achieve internal noise levels in accordance with AS 2021.	DS1	Building materials are to be selected to achieve appropriate construction acoustic performance ratings taking into consideration the intended land use and site specific noise exposure level.	
		DS2	Internal noise levels of development within the Victoria Road Precinct are to have internal noise levels no greater than the identified maximum noise values when an aircraft passes overhead:	
		Building Type and Activity		**Indoor LSmax Design Sound Level, dB(A)**
		Houses, home units, flats, caravan parks		
		Sleeping areas, dedicated lounges		50
		Other habitable spaces		55
		Bathrooms, toilets. Laundries		60
		Hotels, motels, hostels		
		Relaxing, sleeping		55
		Social activities		70
		Service activities		75
		Schools/universities		
		Libraries, study areas		50
		Teaching areas, assembly areas		55
		Workshop, gymnasia		75
		Hospitals, nursing homes		
		Wards, theatres, treatment and consulting rooms		50
		Laboratories		65
		Service areas		75
		Public buildings		
		Churches, religious activities		50
		Theatres, cinemas, recording studios		40*
		Court houses, libraries, galleries		50
		Commercial buildings, offices, shops		
		Private offices and conference rooms		55
		Drafting, open houses		65

Design Principles		Design Solution	
		Typing, data processing	70
		Shops, supermarkets, showrooms	75
		Industrial	
		Inspection, analysis, precision work	75
		Light machinery, assembly, bench work	80
		Heavy machinery, warehouse, maintenance	85

***NB** *With the exception of such premises exhibiting amplified music.*

Below is guidance on how the required internal noise levels might be achieved for a proposed development within the Victoria Road Precinct. Table 1.3 lists construction acoustic performance ratings (or weighted sound reduction index, Rw) for individual building elements. These performance ratings are minimum requirements and are to be used as the base starting point for development proposals within the Victoria Road Precinct. There are five categories of acoustic performance, with Category 1 being the least onerous and Category 5 the most onerous.

Table 1.3: Construction Acoustic Performance rating

Category	Windows/ Sliding Doors	Facade	Roof	External Door	Floor
1	24	38	40	28	29
2	27	45	43	30	29
3	32	52	48	33	50
4	35	55	52	33	50
5	43 to 47	55	55	40	50

Note 1: Floor Rw only apply to ground floor.
Source: Sydney Airport masterplan

The five categories can be characterised in general terms with respect to an everyday familiar situation (e.g. house 10m from a 60/70km/h street) as follows:

i. **Category 1** – road with a daily average traffic volume of 800-2,500 vehicles, typically a minor collector road serving less than 100 houses with no through traffic (this is a relatively standard light weight clad dwelling construction with standard glazing);

ii. **Category 2** – road with a daily average traffic volume of 2,500-7,500 vehicles, typically a collector/ distributor road serving 200 to 250 dwellings with some through traffic, e.g. Victoria Road, Bellevue Hill;

iii. **Category 3** – road with a daily average traffic volume of 7,500-18,000 vehicles, e.g. King Street, Newtown (this dwelling is 'middle' of the categories having brick veneer facades, laminated glazing and roof insulation);

iv. **Category 4** – road with a daily average traffic volume of 18,000-30,000 vehicles, e.g. Beecroft Road, Cheltenham; and

v. **Category 5** – road with a daily average traffic volume of 30,000-60,000 vehicles, e.g. Princess Highway, Tempe (this is a well-constructed double masonry dwelling with double glazing, acoustic seals, double ceiling lining and insulation).

Source: Volume ranges adopted from "Development near rail corridors and busy roads - Interim guideline", NSW Department of Planning, December 2008.

Tables 1.4 to 1.6 below illustrate possible construction methods/treatments for achieving the required sound reduction levels set out in **Table 1.3**. The construction methods/ treatments set out in these tables do not represent the only design solution capable to provide the necessary sound reduction. They are therefore to be used as a guide only.

Table 1.4: Windows and sliding doors construction methods/ treatments

Category	Min Rw	Construction
1	24	Openable with minimum 4mm monolithic glass and standard weather seals.
2	27	Openable with minimum 6mm monolithic glass and full perimeter acoustic seals.
3	32	Openable with minimum 6.38mm laminated glass and full perimeter acoustic seals.
4	35	Openable with minimum 10.38mm laminated glass and full perimeter acoustic seals.
5	43	Openable Double Glazing with separate panes: 5mm monolithic glass, 100mm air gap, 5mm monolithic glass with full perimeter acoustic seals.
6	47	Openable Double Glazing with separate panes: 6mm monolithic glass, 150mm air gap, 4mm monolithic glass with full perimeter acoustic seals.

Source: "Development near rail corridors and busy roads - Interim guideline", NSW Department of Planning, December 2008. 2. EMM database.

Table 1.5: Facade / elevation construction methods/ treatments

Category	Min Rw	Construction
1	38	**Timber Frame or Cladding**: 6mm fibre cement sheeting or weatherboards or plank cladding externally, 90mm deep timber stud or 92mm metal stud, 13mm standard plasterboard internally.
		Brick Veneer: 110mm brick, 90mm timber stud or 92mm metal stud, minimum 50mm clearance between masonry and stud frame, 10mm standard plasterboard internally.
		Double Brick Cavity: 2 leaves of 110mm brickwork separated by 50mm gap.
2	43	**Timber Frame or Cladding**: 6mm fibre cement sheeting or weatherboards or plank cladding externally, 90mm deep timber stud or 92mm metal stud, 13mm standard plasterboard internally with R2 insulation in wall cavity.
		Brick Veneer: 110mm brick, 90mm timber stud frame or 92mm metal stud, minimum 50mm clearance between masonry and stud frame, 10mm standard plasterboard internally.
		Double Brick Cavity: 2 leaves of 110mm brickwork separated by 50mm gap.

Category	Min Rw	Construction
3	52	**Brick Veneer**: 110mm brick, 90mm timber stud or 92mm metal stud, minimum 50mm clearance between masonry and stud frame, 10mm standard plasterboard internally.
		Double Brick Cavity: 2 leaves of 110mm brickwork separated by 50mm gap.
4	55	**Brick Veneer**: 110mm brick, 90mm timber stud or 92mm metal stud, minimum 50mm clearance between masonry and stud frame.
5	55	**Double Brick Cavity**: 2 leaves of 110mm brickwork separated by 50mm gap with cement render to the external face of the wall and cement.

Source: "Development near rail corridors and busy roads - Interim guideline", NSW Department of Planning, December 2008.

Table 1.6 – Roof / Ceiling construction methods / treatments

Category	Min Rw	Construction
1	40	Pitched concrete or terracotta tile or metal sheet roof with sarking, 10mm plasterboard ceiling fixed to ceiling joists, R1.5 insulation batts in roof cavity.
2	43	Pitched concrete or terracotta tile or metal sheet roof with sarking, 10mm plasterboard ceiling fixed to ceiling joists, R2 insulation batts in roof cavity.
		Low slope metal roof, timber or steel purlins, furring channels, 2 x 16mm Gyprock Fyrchek plasterboard, R2.5 insulation batts in roof cavity.
3	48	Pitched concrete or terracotta tile or sheet metal roof with sarking, 1 layer of 13mm sound-rated plasterboard fixed to ceiling joists, R2 insulation batts in roof cavity.
4	52	Pitched concrete or terracotta tile or sheet metal roof with sarking, 2 layers of 10mm sound-rated plasterboard fixed to ceiling joists, R2 insulation batts in roof cavity.
5	55	Pitched concrete or terracotta tile or sheet metal roof with sarking, 2 layers of 10mm sound-rated plasterboard fixed to ceiling joist using resilient mounts, R2 insulation batts in roof cavity.

9.47.15.3 *Illustrative Examples*

Using the above principles, guidelines and treatments, the following indicative floor layouts (Figure 1.1) illustrate how a future residential development within the Victoria Road Precinct could be designed to respond to this Noise Policy and other key relevant acoustic requirements.

It is important to note that the acoustic requirements do not result in the need to design an apartment in a particular way. As demonstrated by the illustrative examples, numerous designs and layouts can still be achieved whilst adhering to the principles and requirements set out in this Noise Policy.

The examples below illustrate different ways in which an apartment can be designed, for instance, the inclusion of a wintergarden vs. the use of a balcony to provide open space, and the positioning of living areas, kitchens and bathrooms.

Figure 1.1 - Indicative floor layouts
Source: Turner Studio

9.47.15.4 *Residential Facilities*

Noise impacts from aircraft or other noise sources e.g. existing live music and entertainment venues within the Victoria Road Precinct, are likely to affect the attractiveness and usability of external communal space within residential developments. Use of the external communal space may not be appropriate in cases where this involves quieter activities such as reading, quiet contemplation or relaxing.

In recognition of the fact that the amenity of external communal space is diminished due to aircraft noise and other potential noise sources, it is considered appropriate that development within the Victoria Road Precinct be required to provide other indoor facilities that will help to offset these impacts, and ensure that all development afford its residents with a variety of communal spaces and facilities to support their recreational and leisure needs. Table 1.7 below outlines these requirements.

Table 1.7: Indoor Communal Space

Design Principles		Design Solution	
DP1	To ensure that residential flat buildings incorporate communal facilities to support a high level of amenity for residents.	DS1	Indoor communal open space is to have a combined minimum gross floor area of 40sqm ratio or 1sqm per apartment, whichever is larger. The maximum requirement for indoor communal space is 250sqm.
DP2	To ensure that a proportion of communal open space occupants of residential flat buildings is appropriately insulated against noise impacts.	DS2	Indoor communal facilities can comprise one or more rooms, areas or facilities. Key examples may include: • Music/sound rooms; • Gymnasium; • Indoor pool; • Greenhouse/conservatory; • Games room; • Cinema / media room; • Function room / meeting room; • Multi-purpose room; and • Shed / workshop.
DP3	To ensure that residents have access to useable indoor communal facilities and outdoor communal open space.		
DP4	To encourage flexibility in the way that communal space and facilities are provided within development.	DS3	Indoor communal facilities provided in accordance with this Noise Policy does not negate or substitute the need to provide landscaping and communal open space in accordance with the State Environmental Planning Policy No.65 – Design Quality of Residential Flat Development (SEPP 65) and the NSW Apartment Design Guide.
		DS4	The internal noise level of indoor communal facilities is to be no greater than those recommended in AS2021 based on closely matched categories and intended use (e.g. 70dB(A) LSmax for areas commensurate with social activities in a hotel facility).
		DS5	Indoor communal facilities are to be designed with a particular purpose/function in mind and this purpose is to be indicated on the plan. Where a multi-purpose room is proposed, this room is to be provided with appropriate facilities including seating, tables, toilets and a kitchenette.
		DS6	Communal toilet/s are required to service the indoor communal facilities.

9.47.15.5 *Implementation and Management*

The following outlines the implementation and management measures that are to be put in place to ensure that development is designed in accordance with the Noise Policy and any approved plans and conditions. In addition, it also sets out the requirements relating to the ongoing implementation, management, information sharing and the raising of awareness for all matters associated with aircraft related noise impacts on the Victoria Road Precinct. It also addresses the management, information sharing and raising awareness of potential noise impacts from existing live music and entertainment venues in the area.

Table 1.8 - Implementation and Management

Design Principles		Design Solution	
DP1	To ensure that development incorporates all the necessary approved acoustic insulation treatments and measures.	DS1	A Noise Impact Assessment Report is to be submitted with any development application for a building.
		DS2	At Construction Certificate stage, there is to be written verification from an appropriately qualified acoustic expert that the noise mitigation measures approved as part of the development application have been incorporated into the detailed construction plans.
		DS3	Prior to Occupation Certificate being issued final sign-off is to be obtained from an appropriately qualified acoustic consultant confirming that the building materials and acoustic treatments have been constructed in accordance with the detailed construction plans.
DP2	To ensure that occupants of buildings are informed about aircraft noise and noise from existing live music and entertainment venues and how this affects the Victoria	DS4	**Noise Information Packs** are to be provided to any potential purchaser as part of the Contract of Sale. All Contracts of Sale are to include a clause that specifies that the

Design Principles		Design Solution	
	Road Precinct prior to purchasing a property.		prospective of purchaser has read and acknowledges the contents within the **Noise Information Pack**.
DP3	To ensure that information about aircraft noise and noise from existing live music and entertainment venues within the precinct* is readily available for residents, property and business owners within the Victoria Road Precinct.	**DS5**	A community notice board is to be provided in the common lobby area for all residential flat buildings. An information notice about aircraft noise and other potential major noise sources is to be provided on the community notice board at all times.
DP4	To encourage flexibility in the way that communal space and facilities are provided within development.	**DS6**	The **Noise Information Packs** are to contain the following information: • An explanatory note on aircraft noise and how it may affect living within the Victoria Road Precinct; • An explanation of the policies and controls that govern aircraft noise; • An explanation of Sydney Airport's operations and its relationship to the Victoria Road Precinct; • TA map of the current/latest ANEF Contours in relation to the site; and • A link to the most recent aircraft master plan published by Sydney Airport, which can be downloaded from https://www.sydneyairport.com.au/corporate/planning-and-projects/master-plan (Chapter 14 Noise Management). • Existing numbers of aircraft movements (morning, daytime and evening) and existing periods of respite from aircraft movements (morning, daytime and evening), consistent with the most recent Sydney Airport Operational Statistics report published by Airservices Australia and available from www.airservicesaustralia.com. • Forecast numbers of aircraft movements (morning, daytime and evening) and forecast periods of respite from aircraft movements (morning, daytime and evening, sourced from the most recent airport master plan published by Sydney Airport and available from www.sydneyairport.com/corporate/planning-and-projects/masterplan. • A copy each of the following

Design Principles		Design Solution	
			aircraft noise mapping charts, as published in the most recent airport master plan published by Sydney Airport: *Australian Noise Exposure Forecast* • Frequency-based aircraft noise charts for the periods 6am to 11pm (N70) and 11pm to 6am (N60). • Details of the location and hours of operation of live music and entertainment venues within the precinct.
		DS7	A copy of the **Draft Noise Information Pack** is to be submitted with any development application for a building.
***NB** Refer also to Schedule 2 - Draft notes on live music venues within the precinct for Noise Information Packs.*			

9.47.15.6 *Dictionary*

The terms used in this Policy are defined in the Standard Instrument – Principal Local Environmental Plan. Additional definitions that apply to this Noise Policy include:

Aircraft Noise Exposure Forecast (ANEF) – contour maps that show a forecast of aircraft noise levels that are expected to exist in the future. They are prepared for all of the major and regional airports (in this case Sydney Airport) that have a large number of annual movements;

Aircraft Noise Exposure Index (ANEI) – contour maps that show actual historical aircraft noise levels over a given period of time;

Noise Information Pack (NIP) – A package of information that is collated and used as the basis for informing all new residents, property and business owners about how aircraft noise affects land within the Victoria Road Precinct, including their property. At a minimum the NIP must include:

i. the airports hours of operation and likely times that aircraft noise will affect the precinct;
ii. likely average number of aircraft movements per day;
iii. aircraft noise affecting the precinct;
iv. a list of the material treatments used in the construction of the building;
v. a map of the current/latest ANEF Contours in relation to the site;
vi. a plan of the apartment/building confirming the building materials and acoustic mitigation measures in accordance with the approved plans and documents; and
vii. details of the location and hours of operation of live music and entertainment venues within the precinct.

Indoor Communal Facility – a communal facility that is provided for the benefit of all inhabitants within a residential flat building. The communal facility is accessible by all members of the residential development and is a facility able to be used for communal recreational and leisure purposes. Key examples may include:

i. Music/sound rooms;

ii. Gymnasium;
iii. Indoor pool;
iv. Greenhouse/conservatory;
v. Games room;
vi. Cinema / media room;
vii. Function room / meeting room;
viii. Multi-purpose room; and
ix. Men's shed / workshop.

Victoria Road Precinct – the area of land to which this Policy applies as shown in Section 9.47.1.1 of the Victoria Road Precinct (Precinct 47) DCP.

9.47.16 Schedule 2 – Draft Notes on Live Music Venues within the Victoria Road Precinct for Noise Information Packs.

9.47.16.1 *Live Music and Entertainment Noise & its context within the Victoria Road Precinct*

1. **Live Music and Entertainment Noise:** Creative and cultural vibrancy are essential to what makes the Inner West a great place to live, visit and do business in. Living in the inner city comes with a range of benefits including being part of a diverse group of people; access to great places to eat and shop; and ready access to entertainment venues. The inner city provides residents; employees and visitors with the potential to live a rich cultural life by being in close proximity to a range of people and activities. Many of these activities are noise generating: e.g. from traffic noise generated by people in motorised vehicles travelling to; from; and within the precinct; and noise generated from people simply having conversations to groups of people participating in larger cultural events. The invitation of higher density inner city living comes with a need to balance potentially competing cultural pursuits by being tolerant of a wide variety of people and activities.

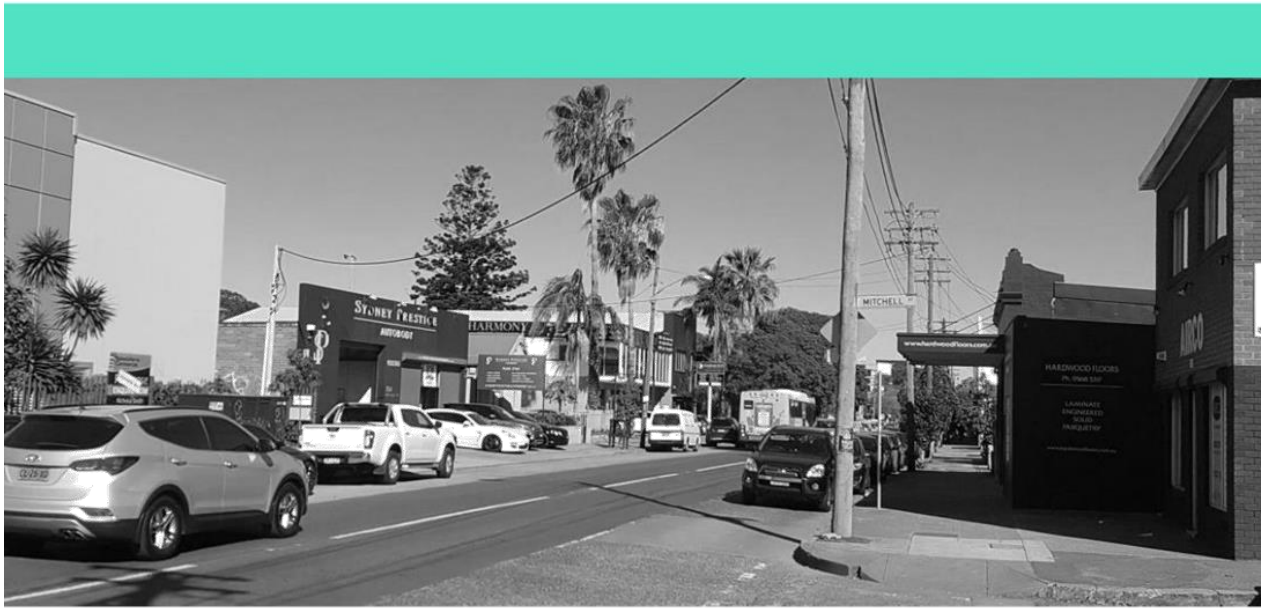
2. **Victoria Road Precinct Context:** The Victoria Road Precinct is home to a mix of existing creative industries, including live music and entertainment venues. Venues include the Red Rattler (6 Faversham Street, Marrickville); Marrickville Bowling & Recreation Club (91 Sydenham Road, Marrickville); and The Factory Theatre (105 Victoria Road, Marrickville). These venues pre-date the rezoning of the precinct which permitted a wider range of uses such as multi- level residential developments. Enjoyment of the precinct's live music and entertainment venues is a key attractor to living in the area. New buildings in the Victoria Road Precinct are designed to have a high level of noise attenuation. If you live in close proximity to a live music and entertainment venue, you can expect reasonable levels of noise during the legal hours of operation of those venues. When required, keeping windows and doors closed will enable the noise attenuation measures designed into buildings in the Victoria Road Precinct to assist in mitigating against live music and entertainment noise.

INNER WEST COUNCIL

Appendix B –

Marrickville Contributions Plan 2014

Victoria Road Precinct – Marrickville (Sub – plan)



Administration and Review Record of this Contributions Sub-plan:

Approval of this sub-plan (Amendment to Marrickville Contributions Plan 2014) Date in Force of this Amendment:	
Exhibition Period:	
Group Responsible for the development of this sub - plan:	
Groups responsible (shared responsibility) for the administration and implementation of this sub - plan:	
Related Plans and Documents:	
Appendices:	
References & Legislation:	
Document Identifier:	

Contents:

Section 1 – Executive Summary:

1.1 Purpose and Objectives of this Sub-plan

Following on from the gazettal of the amendment to the Marrickville Local Environmental Plan for the Victoria Road Precinct – Precinct 47 (P47) by the NSW Government in late 2017 and subsequent adoption of the Development Control Plan (DCP) for the precinct by Inner West Council in mid-2018, this draft contributions plan amendment to the existing Marrickville Contributions Plan seeks to focus on what critical public facilities are required to be implemented, to ensure that the increased development in P47 can function in a practical, safe manner.

A considerable body of research work had been prepared since 2012, by the range of consultants engaged by the planning proposal proponent (Danias Holdings Pty Ltd.) for P47. These studies revealed that the most critical infrastructure needs for P47 are:

- *Flooding and stormwater management; and*
- *Traffic and transport facilities provision.*

Given financial land price constraints within the upzoned areas of P47, it was agreed amongst relevant Council staff that whilst the upzoned areas should continue to meet their community facility/ and recreation facility development contribution responsibilities under the current Marrickville Contributions Plan 2014, it would not be possible to acquire land or to construct new public facilities from Section 7.11 development contributions alone. Note: this does not exclude the possibility of additional facilities for these public purposes being achieved via future voluntary Planning Agreements between Inner West Council and/or separately by developers of sites in P47.

Utilising funds from the current Marrickville Contributions Plan (which are to be repaid from subsequent Victoria Road Precinct development contributions) the following consultants were engaged to investigate the critical infrastructure needs for P47:

A. *Flooding and stormwater management* – Cardno Water Infrastructure Engineers – Cardno (WI), who recently completed, for Inner West Council (IWC), the latest Marrickville Valley Flood Risk Management Study and Plan were engaged by IWC to investigate any flooding and stormwater hazard/risks associated with the increased development now permitted within the precinct. Cardno (WI) were also required to prepare; model/test; and cost any necessary communal water infrastructure scheme arising from their investigations.

Arising from public concerns with the relatively high cost of the communal water infrastructure solution subsequently recommended by Cardno (WI) GRC Hydro (GRCH) were engaged to undertake a review of that recommended solution. Based upon the results of that review, GRCH were then re – engaged by IWC to prepare a revised communal water infrastructure scheme for P47. To undertake this work, the latest updated flooding and stormwater model for the locality, commissioned and owned by Sydney Metro, was generously shared with IWC and GRCH. A number of potential communal water infrastructure scheme options were then developed and considered for the precinct but were subsequently rejected for inclusion within this sub-plan (and corresponding DCP) due to the prohibitive costs associated with those schemes and their practical limitations. Accordingly, no communal water infrastructure scheme has been included within this sub- plan. Instead, to address the potential additional risks and downstream impacts (consequences), arising from the increased development in P47, additional controls within the P47 DCP within the Marrickville DCP 2011, have been developed, which will likely result in moderate increases of on-site water storage on redevelopment sites as well as revised levels for entrances to the basement levels of these buildings.

Refer to section 2.5 of this sub-plan for additional information.

B. *Traffic and transport Infrastructure* – Cardno (Traffic and Transport Engineers) - Cardno (T&T) were engaged following a competitive procurement process. Note: the resultant completion of this study relied upon the sharing of information from the proponent's traffic and transport consultant, which is gratefully acknowledged.

The results of these studies have directly informed the work schedules and resultant contribution rates within this sub-plan. As can be seen in the works schedules for this sub-plan a communal water infrastructure scheme has not been pursued within P47 due to affordability constraints. Instead, as recommended by the consultant water engineers for this project, the necessary mitigation of any flooding and stormwater impacts and potential increased risk for new employees; residents and visitors to the Precinct, associated with the increased development within P47 is to be addressed via the inclusion of suitable controls within the P47 component of the Marrickville Development Control Plan 2011.

Approximately $0.3M of public traffic and transport infrastructure works are required to be implemented on government owned land to ensure that the increased permitted development within P47 can be absorbed without the existing level of service within the local road network being worsened. Other potential traffic and transport works, which were identified by Cardno (T&T) in their traffic and transport

needs study for the precinct, have not been included within this sub-plan, on the basis that they are best dealt with by individual or amalgamated developments, as they are to be located on private land and they predominantly relate to both site specific vehicular and pedestrian access issues within the precinct. This decision was also made on the basis that a significant proportion of these additional works are aimed to satisfy the requirements of the Roads and Maritime Services, who have advised IWC that they "will not permit direct vehicular access to/from development via Sydenham Road and Victoria Road. Access to the road network should be provided via rear lanes or local roads."[1] This matter is addressed within the accompanying DCP for the precinct.

In terms of cost sharing, the total cost of the required water infrastructure studies are to be equally shared between the incoming resident and employment population. For the required traffic and transport works, these costs have been apportioned on the extent by which the main expected uses (residential; commercial; and retail etc.) utilise the existing traffic and transport network.

It is important to acknowledge, however, that the total amount of traffic and transport works to be paid for by the developers of the upzoned areas of the precinct, would have been higher, however, IWC was recently awarded *"Black Spot Funding"* for a significant location within the precinct. New traffic lights at the intersection of Chapel Street and Victoria Road have recently been constructed under this funding Program. This has been implemented without the use of any local development contribution funding. Furthermore, these works are separate from the Victoria Road/ Sydenham Road Intersection Upgrade works which have formed part of a recently executed voluntary Planning Agreement between the proponent; Transport for NSW (TfNSW); NSW Roads and Maritime Services (RMS); and the NSW Department of Planning, Industry and Environment (DPIE).

At the time of the original drafting of this sub-plan, Council staff were advised by the DPIE that the draft Planning Agreement contains, but is not limited to, the following:

"…We are currently proposing for the developer to provide the intersection upgrade as follows:

- *Provision of a left-turn slip lane from Sydenham Road (west) to Victoria Road (north); and*
- *Provision of a 90m right-turn bay along Victoria Road (north)."*

These contents of the now executed *Planning Agreement* have been taken into account in the traffic and transport items of this plan, to avoid "double-dipping".

Due to their likely wider benefits, beyond P47, not all of the traffic and transport works on government land can be apportioned to the developers of the precinct e.g. the proposed signalisation of the Fitzroy and Sydenham Road intersection. This and other apportioned works will result in IWC being committed to an approximate

additional expenditure of $655,150 for additional traffic and transport related works in the precinct, over the next 15 – 20 years. The provisions of the draft plan would not preclude these funds being obtained from other sources e.g. grant funds etc. in the future.

In conclusion, the draft contributions plan for the Victoria Road Precinct, as an amendment to the current Marrickville Contributions Plan 2014, (and associated amendments to the Marrickville Development Control Plan 2011), aims to ensure the sustainable delivery of necessary public traffic and transport facilities; and flooding and stormwater related controls that will ensure that the precinct will be able to accommodate, in a safe and responsible manner, the increased development now permitted within this locality.

1. *New South Wales Roads and Maritime Services Department – Correspondence from Greg Flynn (Senior Manager Strategic Land Use – Sydney Planning, Sydney Division to The General Manager – Inner West Council Re: Public Exhibition Amendments to the Marrickville Development Control Plan (MDCP) DCP for Victoria Road Precinct, Marrickville - dated 13 July 2018 – page 4.*

1.2 Nature of Future Development

The nature of the abovementioned infrastructure studies demanded a detailed, ongoing assessment of the expected development permitted under the relevant Local Environmental Plan (as amended); and recently adopted Victoria Road Precinct Development Control Plan, by Council staff, which was then given to the traffic and transport and water infrastructure consultants for this sub-plan.

This assessment relied heavily on the previous, comprehensive, detailed master planning work undertaken by the proponent's planning and architectural consultants, during the planning proposal process for P47. It also relied on the residential and non-residential occupancy rates contained within the existing parent contributions plan to this sub-plan – the existing Marrickville Contributions Plan 2014. As mentioned elsewhere within this plan, it is envisaged that the upzoned areas will accommodate, over the next 15-20 years, a relatively substantial increase in residents (2004 residents), a correspondingly significant increase in commercial employees (5,563.6 persons), and retail related employees (1,091 persons).

1.3 Life of this Sub-plan

This sub-plan is based on forecasted development over the next 15-20 years that will be generated within the upzoned areas of the Victoria Road Precinct. The sub-plan will be monitored during this time to ensure that public infrastructure (under the responsibility of the Inner West Council) is provided as development proceeds. The sub-plan will also be monitored and amended as necessary, as it is possible that the forecast growth and expected land uses may not remain exactly in accordance with those estimated within this sub - plan.

The contribution amounts arising from the infrastructure cost estimates within this sub - plan will be indexed between the date of commencement of this sub-plan and

the date of payment of the contribution in accordance with the existing arrangements of the parent contributions plan to which this sub-plan forms a part of – the existing Marrickville Contributions Plan 2014. Cost estimates will also be monitored regularly to ensure that they reflect current costs and if necessary, amendments will be made to this sub – plan, accordingly.

This sub-plan will operate until (a) all of the contributions required for contribution projects included in the sub-plan have been collected from relevant development approvals; or (b) this sub-plan or the parent contributions plan – The Marrickville Contributions Plan 2014 is repealed in accordance with the requirements of the Regulation or other legislative provisions that facilitates such repeals

1.4 Specific Additional Works Schedules for the Precinct

Figure 1 – Required Traffic and Transport Facilities located on Government owned land – Victoria Road Precinct.

Infrastructure Item No.	Required Traffic and Transport Related Infrastructure – Victoria Road Precinct	Indicative cost to developers $
VRP – R - 001	Sydenham Road/Fitzroy Street signalisation (Total expected cost = $737,000) [A]	147,400
VRP – R - 002	Inclusive Access Study (principles and practical design advice for the private and public domain) (Total expected cost = $100,000)[B]	50,000
VRP – R - 003	Bicycle On-Road Route stencils (Total expected cost = $6,600)[B/C]	3,300
VRP – R - 004	Bicycle Parking Hoops (Total expected cost = $24,500)[B/C]	12,250
	Total of identified Traffic and Transport related works	212,950
	10% Contingency [E]	21,295
	Sub-total	234,245
	Repayment to existing Marrickville Contributions Plan for Precinct 47 traffic and transport study by Cardno (T&T) ($56,980 incl. GST) + purchase of traffic data from RMS ($5,703.50 incl.GST) = $62,683.50	62,683.50
	Grand Total (incl. of GST)	**$296,928.50**

Notes to Figure 1:

A. Given the broader benefits (beyond Precinct 47) of this signalisation only a proportion of the costs (20%) are to be attributed to the contributing area of the precinct.

B. *Similarly, given the likely broader benefits (beyond Precinct 47) of these infrastructure items, only a proportion of the costs (50%) are to be attributed to the contributing area of the precinct.*
C. *The on – road bicycle route stencils (estimated number – 66 stencils) are to be implemented on local bicycle routes located mostly within Precinct 47. Refer to Figure 17 for additional information. The Bicycle parking hoops are to be located on prominent kerbside locations throughout the precinct. It is estimated that 100 bicycle parking hoops will be provided under this sub-plan. See also Precinct 47 – Victoria Road Precinct. Traffic and Transport Needs Analysis Prepared by Inner West Council by Cardno. Dated 9 November 2018.*
D. *The total Inner West Council commitments for those works that are only part funded by developers within the precinct (marked A-C above) = $655,150.*
E. *Given the relative limited range of works a 10% contingency is considered to be a reasonable amount in the circumstances.*

Figure 2 – Required investigations into any necessary stormwater and flood mitigation facilities – Victoria Road Precinct.

Investigations into any necessary stormwater and flood mitigation Infrastructure – Victoria Road Precinct	**Indicative cost to developers $**
Repayment to existing Marrickville Contributions Plan for the cost of the Precinct 47 Stormwater and Flooding Investigation studies by Cardno inc.GST;	71,060
GRC Hydro Peer review of the abovementioned Cardno Study and additional investigations using latest available water modelling information. inc. GST	55, 825
Grand Total (incl. of GST)	**$126,885**

1.5 Contribution Rates for the Victoria Road Precinct (Contributing Area)

Figure 3 below sets out the contribution rates applicable within the contributing area (upzoned area) of the Victoria Road Precinct. For an explanation of the "contributing area" for the precinct refer to Figure 7 of this sub-plan.

Figure 3	Use		Occupancy	Victoria Road Precinct Priority Contribution Items		Existing Marrickville Contribution Plan 2014 Commitments			Total:
				Traffic & Transport Related Infrastructure (Subject to Future Indexing)	Water Related Infrastructure Studies (Fixed Amount – Not Indexed)	Recreation Facilities (Existing - Indexed)	Community Facilities (Existing - Indexed)	Plan Admin Fee (Existing Flat Rate - Not Indexed)	
				$	$	$	$	$	$
LAND USES SUBJECT TO STATE GOVERNMENT CAP*	Residential Units and Secondary Dwellings	1 Bedroom	1.31	$23.25	$24.37	$12,503.61	$1,607.95	$283.18	$14,442.36
		2 Bedroom	2.02	$35.86	$37.57	$19,280.37	$2,479.44	$436.66	$22,269.90
		3 Bedroom	2.88	$51.12	$53.57	$27,488.84	$3,535.03	$622.57	$31,751.13
		4+ Bedroom	3.74	$66.39	$69.56	$35,697.32	$4,590.64	$808.48	$41,232.39
	Attached dwellings, Semi-detached dwellings & Multi-dwelling housing	1 Bedroom	1.51	$26.80	$28.09	$14,412.55	$1,853.43	$326.42	$16,647.29
		2 Bedroom	2.08	$36.92	$38.69	$19,853.05	$2,553.08	$449.63	$22,931.37
		3 Bedroom	2.79	$49.52	$51.89	$26,629.82	$3,424.56	$603.12	$30,758.91
		4+ Bedroom	3.63	$64.43	$67.52	$34,647.40	$4,455.62	$784.70	$40,019.67
	Dwelling Houses	All Sizes	2.86	$50.77	$53.20	$27,297.95	$3,510.48	$618.25	$31,530.64
	Land Subdivision	Single Dwelling House	2.86	$50.77	$53.20	$27,297.95	$3,510.48	$618.25	$31,530.64
	Boarding Houses	1 Persons rooms less than 16m2	1	-	$18.60	$9,544.74	$1,227.44	$215.82	$11,006.60
		2 Person rooms 16m2 or greater	2	-	$37.20	$19,089.47	$2,454.89	$431.63	$22,013.19
LAND USES NOT SUBJECT TO STATE GOVERNMENT CAP*	Commercial	Per 100m2 GFA	1/20m2	$228.00	$93.00	$9,544.74	$344.98	$204.21	$10,414.93
	Retail	Per 100m2 GFA	1/20m2	$456.50	$93.00	$9,544.74	$344.98	$208.78	$10,648.00
	Industrial	Per 100m2 GFA	1/100m2	$45.60	$18.60	$1,908.94	$68.99	$40.84	$2,082.97

Notes for Figure 3 above:

i. *The room areas for boarding houses referred to in the above table exclude any area used for the purposes of a private kitchen or bathroom facilities.*
ii. *GFA means gross floor area.*
iii. ** Pursuant to reforms to the NSW development contributions system, undertaken in 2008, infrastructure contributions payable to local councils have been capped at $20,000 per residential lot. All contributions exceeding $20,000 require approval from the Minister for Planning. The introduction of the threshold was effective as of 30 April 2009, as provided for in the Minister's direction under s94E of the EP&A Act, dated 13 January 2009. Accordingly, for those residential uses that are subject to the "cap" irrespective of the total contribution amount in the right hand column of the table, the applicable contribution shall not exceed $20,000. Credits for existing residential development are also capped at $20,000.*
iv. *For those contributions that are subject to the "cap", priority will be given to ensuring that the full monies for the Victoria Road Precinct Infrastructure Priority Items, detailed above, are achieved, with the other existing items collected in the same ratio up to the total capped amount.*
v. *Development within the "contributing area" of the precinct will be responsible only for the traffic and transport upgrades within Precinct 47; therefore, the existing "traffic facilities" contribution included within the "Marrickville LGA other than Planning Precinct areas" does not apply to the "contributing area".*
vi. *In keeping with the traffic generation rates in the parent contributions plan, boarding houses are not required to contribute to traffic and transport related infrastructure.*
vii. *For the Victoria Road Precinct Priority Contribution Items, the "Commercial" Traffic and Transport contribution rate has been utilised to inform the "Industrial" Traffic and Transport Contribution amount.*
viii. *The "Existing Marrickville Contribution Plan 2014 Commitments" are for the most current "June 2019 Quarter".*

Section 2 – Background to the Development of this Sub - plan:

2.1 Introduction to Section 7.11 and Section 7.12 Development Contributions

"A user – pays philosophy underlies the funding of local or community infrastructure required to satisfy service demand generated by development activity. This requires developers to contribute to the reasonable cost and provision of local public facilities needed to support new development."[2]

Accordingly, sections 7.11 and 7.12 of the New South Wales Environmental Planning and Assessment Act 1979 (E.P.& A. Act) (as amended), enable planning authorities to levy contributions, on developers, for the provision of public services and public amenities, required as a consequence of expected development within an area. These sections supersede the former, more widely known, corresponding section 94 (development contributions) and section 94A (fixed percentage development contributions) sections of the E. P. and A. Act.

Generally, section 7.11 and 7.12 contributions can only be made towards:

- *Capital costs including land acquisition;*
- *Public facilities which the planning authority has a responsibility to provide; and*
- *Public facilities which are needed as a consequence of or to facilitate new development.*

2 *NSW Secretary's Practice Note: Local Infrastructure Contributions. NSW Department of Environment and Planning - page 4.*

2.2 The Historical Planning Framework: Marrickville Development Control Plan 2011/Former Land Use Zoning/ Planning Proposal History/ Subsequent Marrickville Local Environmental Plan Amendment No.14

The land, which is the main subject of this plan, lies within Precinct 47 - "Victoria Road" Precinct as identified within section 9.47 of Marrickville Development Control Plan 2011. *"A Development Control Plan is a commonly used town planning document which provides detailed guidance for the use of land and design and assessment of new development."*[3]

The Marrickville Development Control Plan 2011 (MDCP 2011) was adopted by the former Marrickville Council on 12 July 2011. It came into effect on 15 December 2011.

Part 9 of the MDCP 2011, "Strategic Context" - "provides objectives and controls, in addition to preceding parts of this Development Control Plan (DCP), which are specific to a particular area, and guide the implementation of the desired future character for the area."[4]

Part 9 of the MDCP 2011, divides the area covered by the MDCP 2011 (the former Marrickville Municipal area) into forty - seven (47) sub – areas: precincts, of which, the subject Victoria Road (Precinct 47) is the last of these.

Typically, these precinct controls within the MDCP 2011 contain: *statements of the existing character of the precinct*; *the desired future character of the precinct; details of any heritage conservation areas within the precinct; precinct – specific planning controls; and site – specific planning controls.*

Historically, the Marrickville industrial area (of which Victoria Road – Precinct 47 forms a part of) pre-dates World War I and is one of the oldest surviving industrial precincts in Australia, containing industrial buildings that are still in use today. Evidence of the pre-existing Marrickville village, centred around Chapel Street, Marrickville, also still survives within the Victoria Road Precinct, in the form of terrace housing and semi – detached housing.[5] Traditional industrial uses (assisted by the draining of the Gumbramorra Swamp in 1897) in the area, included potteries; metal work; quarries; food manufacturing; brickmaking; and woollen mills, etc.[6]

This industrial history is reflected in the following statement of the existing character for the area, which was until recently, included within section 9.47 Strategic Context Victoria Road of the MDCP 2011.

"This precinct is centrally located within the Marrickville local government area. The area is bounded by Addison Road to the north, Fitzroy Street to the east, Sydenham Road to the south and generally by the rear of properties facing Shepherd Street to the west. Victoria Road is the main north to south link through the precinct linking to Cook Road. A number of east west links exist, though many are cul-de-sacs used for access and loading bays for industrial sites.

The precinct contains a mixed character, though overall the precinct is dominated by industrial land uses. Residential dwelling houses are interspersed between industrial factory units. Business and local retail uses are also located along some of the main roads in the precinct such as Addison Road and Enmore Road. Light industrial uses are located along the northern side of Farr Street that create a buffer for the adjoining residential properties. Other land uses within the precinct include the Marrickville Bowling and Recreation Club and Wicks Park."[7]

Figure 4 below, gives considerable insight into how residential development within the precinct (and beyond) has co-existed with generally large industrial concerns. Post 1943 a considerable proportion of these dwellings were demolished to provide for the more modern post WWII, generally smaller industrial premises within the locality, and much needed open space for the Marrickville High School located in the central area of the precinct.

Figure 4 – A 1943 Aerial Image of Victoria Road Precinct. Note that the historic character of the area, at this time was one of densely settled small workers type housing interspersed with generally large scale industrial developments in conjunction with some large undeveloped open spaces. Much of the existing key public owned infrastructure: Wicks Park; Marrickville Bowling Club; and the Stormwater Channel were in place by that time. Image Courtesy of Six Maps. https://maps.six.nsw.gov.au/

In early 2012, in the lead up to former Marrickville Council's consideration of draft Marrickville Local Environmental Plan (MLEP) 2011 and draft Marrickville Development Control Plan (MDCP) 2011 Amendment No.1, Danias Holdings and a number of other landowners within the Victoria Road Precinct made representations to the former Marrickville Council seeking changes to planning controls to allow a broader range of uses.

These representations culminated in the former Marrickville Council resolving on the 1 May 2012, to advise the rezoning proponent (Danias Holdings Pty Ltd) that Council would consider revised planning controls for the Victoria Road Precinct and invited the proponent to submit a Planning Proposal, containing the potential land – use changes.

Due, in part to the combined complexities of the location (flooding; traffic and transport; aircraft noise issues etc.); and the linkages between the potential rezoning of the Victoria Road Precinct and planning for the needs of the broader former Marrickville Council area (and subsequent Inner West Council area) i.e. Employment Lands Strategy issues etc.; consideration on the merits and details of this matter occurred over a number years - from the lodgement of the preliminary planning proposal for the precinct in May 2014, until the final approval of the upzoning of part of the Victoria Road Precinct by the NSW Government via Marrickville Local Environmental Plan 2011 (Amendment No.14) on 1 December 2017.

It is important to note that in approving the rezoning of part of this part of the Victoria Road Precinct, for an increased scale and intensity of development in conjunction with new permitted land uses, the New South Wales State Government acknowledged, as part of their making of this amendment Marrickville Local Environmental Plan 2011, as law, that all of the infrastructure needs for the new permitted development, within the precinct, had not been fully resolved.

For example:

The Deputy Secretary of Planning Services (of the NSW Department of Planning & Environment), Marcus Ray, in his notice, by letter, in late 2017, to the Inner West Council's Interim General Manager, of the making of Amendment No.14 to Marrickville Local Environmental Plan 2011, advised the following:

"*…I advise that as delegate of the Greater Sydney Commission, I have made the Plan [Marrickville Local Environmental Plan 2011 (Amendment No.14)] under section 59 (2) of the Environmental Planning and Assessment Act 1979. Under section 34(5), it will take effect when published on the NSW Legislation website.*

The Plan has been finalised as it will provide capacity to deliver 6,000 new jobs and 1,100 new dwellings in a location well serviced by public transport, within 30 minutes of major employment hubs and exiting commercial centres, and within walking distance of a major shopping centre…… I note that clause 6.18 of the Plan requires satisfactory arrangements be in place for the delivery of state infrastructure of the precinct before development applications are determined. I encourage Council to work with the proponent and Roads and Maritime Services to establish a suitable design for the Sydenham Road and Victoria Road intersection, including an infrastructure staging and delivery plan.

The Department recognises the importance of local infrastructure provision. The Department has expressed the clear expectation to the proponent that further negotiation should occur with the Council to ensure that demand for local infrastructure generated by the development is funded through a Section 94 [now section 7.11 plan] or via a VPA [Planning Agreement – voluntary]. The Department will assist in facilitating any discussions with the proponent."

In essence, the majority of the land that was rezoned under this amendment was previously zoned "IN1 General Industrial" under Marrickville Local Environmental Plan 2011 (MLEP 2011). The planning proposal for the precinct resulted in this previously industrial zoned land being rezoned to a mix of:

- R3 Medium Density Residential – land on the western side of Farr Street;
- R4 High Density Residential – being the majority of the block bounded by Victoria Road, Sydenham Road, Farr Street and Marrickville Public School;
- B4 Mixed Use – land on the eastern and western sides of Victoria Road (and inclusive of part of Victoria Road) near the intersection with Sydenham Road;
- B5 Business Development for all other land to relating to the planning proposal (and inclusive of Rich Street; parts of Chapel Street; parts of Victoria Road; part of Smith Street; and parts of Chalder Street); and
- Part of the land zoned has been zoned SP2 – Future Road Corridor. This road widening at the intersection of Victoria Road and Sydenham Road and along the western side of Victoria Road is aimed to facilitate an upgraded design and performance for this intersection.

This information is shown diagrammatically within Figure 5 – *next page*.

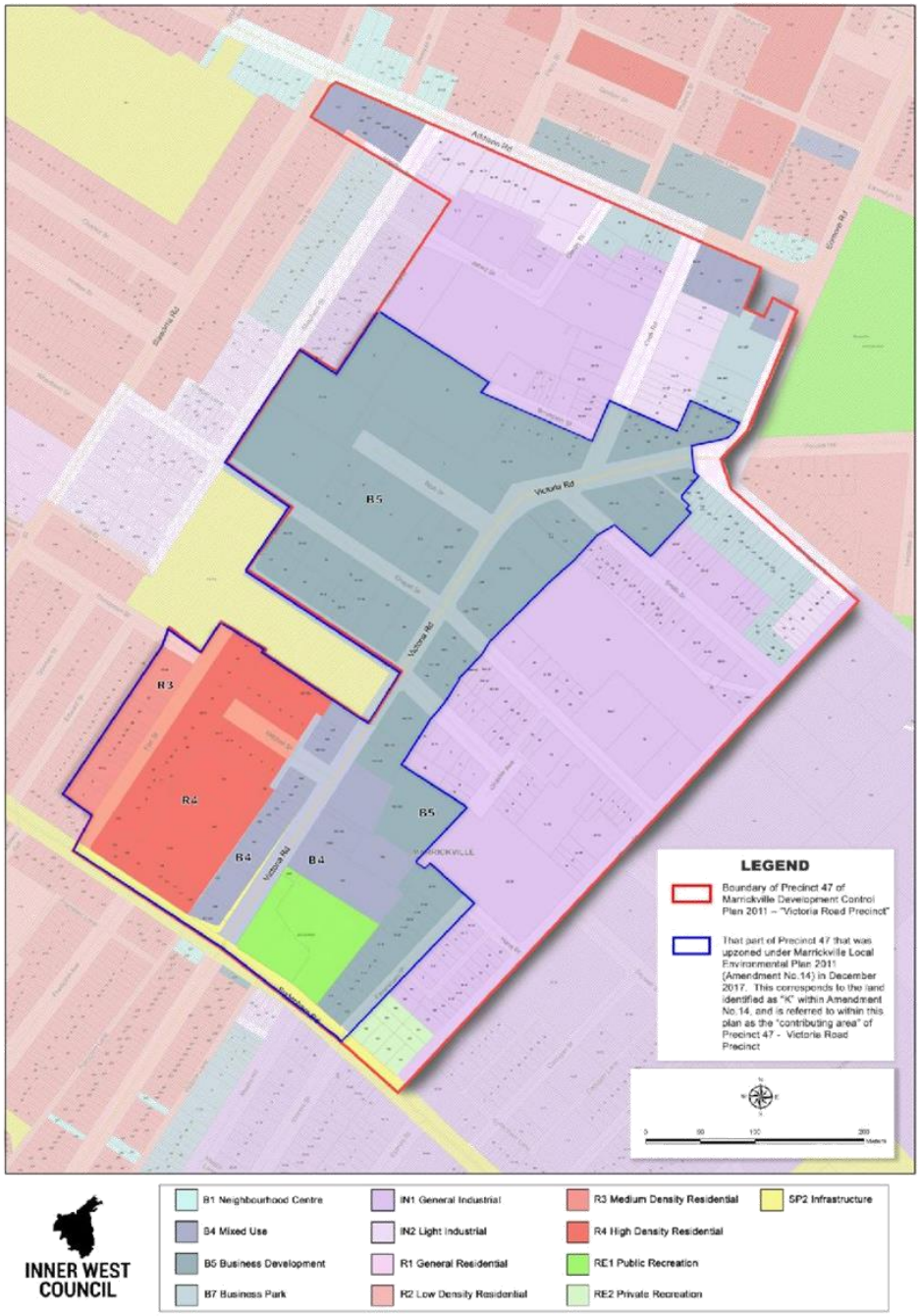


Figure 5 – Location of land use zones within the Victoria Road Precinct. Source: Marrickville Local Environmental Plan 2011 (as amended) Inner West Council. (Note: the rezoning of roads which formed part of this amendment is not shown here for ease of identification of the main zone areas)

Inner West Council subsequently considered associated amendments to Part 9.47 *Victoria Road Precinct* Marrickville Development Control Plan 2011 (draft Victoria Road DCP), which was drafted by the proponent of the Victoria Road Planning Proposal, (Ethos Urban/Dania Holdings Pty Ltd) in order to support the Amended Local Environmental Plan for the locality.

The draft Victoria Road DCP was publicly exhibited between from 8 May 2018 to 5 June 2018. A number of submissions were received by IWC in relation to the public exhibition. After considering a Council report on the results of the exhibition and potential amendments to the draft DCP, at its meeting of 28 August 2018, IWC resolved to "…[adopt] the Victoria Road Precinct Development Control Plan as exhibited" Resolution No. C0818 (3) Item 14.

Later, at its meeting of 11 September 2018, in relation to the issue of the delivery of *Affordable Housing* within the precinct, Inner West Council resolved "…..[to seek] timely expert advice on how to get the financial feasibility analysis that would support the most effective application of Council's affordable housing policy to the residential component of the Victoria Road Precinct. This advice should canvas whether it can be funded from section 94 monies [section 7.11/section 7.12] funds or the LEP budget; and a report be brought back to the first meeting in October 2018 [relating to this matter]. Resolution No. C0918 (1) Item 18.

Accordingly, it is not intended to address the affordable housing needs of the precinct within this plan. This is to be addressed as a separate matter in accordance with the abovementioned resolution.

3 *Marrickville Development Control Plan 2011 - former Marrickville Council – now part of Inner West Council. Page 1.*
4 *Marrickville Development Control Plan 2011 - former Marrickville Council – now part of Inner West Council. Page 4.*
5 *Internal Inner West Council (IWC) Memorandum to Niall Macken (Team Leader - Heritage and Urban Design) from Dr. Noni Boyd (IWC Heritage Specialist) concerning: Heritage Review – Draft Victoria Road Planning Proposal – dated 28 May 2018. Page 10.*
6 *Rich Street Precinct Marrickville, Development Application, Statement of Heritage Impact by Artefact Heritage on behalf of Danias Holdings Pty Ltd, October 2017. Page 7.*
7 *Marrickville Development Control Plan 2011 – 9.47 Strategic Context – Victoria Road. Section 9.47.1 Existing Character. Page 1.*

2.3 Clarification of the Area to which this Sub - plan applies

Section 9.47 of the Marrickville Development Control Plan 2011 sets the boundaries of the area covered by the 47th Precinct ("The Victoria Road Precinct") of this DCP. There is a potential for some confusion as to what land comprises the *"Victoria Road Precinct"* given that the July 2016 *Planning Proposal Report* by JBA Consultants, which lead to the eventual rezoning of part of Precinct 47, by the NSW Department of Planning & Environment, made a clear distinction between the terms: "*Precinct 47"*; and the *"Victoria Road Precinct"*. For the purposes of that *Planning Proposal Report* the *"Victoria Road Precinct"* was used to define that part of the precinct that was requested to be upzoned. This land was then, subsequently referred to as area

"K" within Amendment No.14 to Marrickville Local Environmental Plan 2011, which made the rezoning law. Refer to Figures 6 and 7 below.

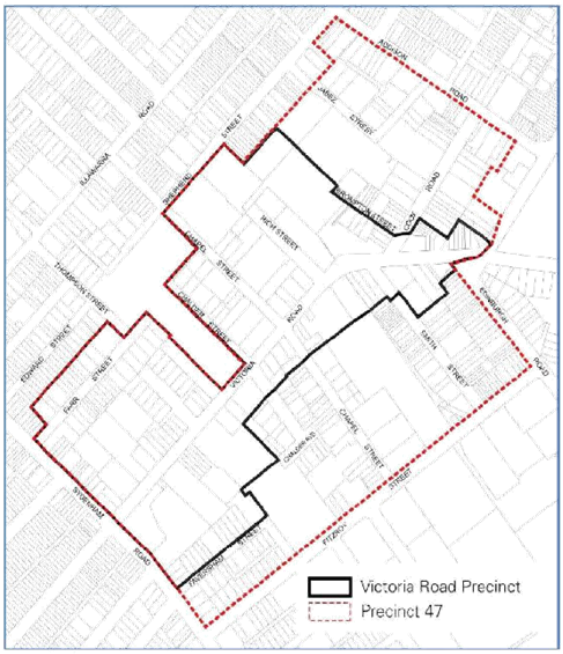


Figure 6 – The depiction of the Victoria Road Precinct within "Figure 7 – Precinct 47 and rezoning boundary" as shown on page 25 of the "Planning Proposal Planning Report - Victoria Road Precinct, Marrickville. Planning proposal for land uses and development standards – submitted to Marrickville Council on behalf of Danias Holdings. Prepared by JBA Urban Planning Consultants Pty Ltd and dated July 2016. Report No.1350."

However, for the purposes of this plan, and to avoid any confusion, particularly with the associated *Victoria Road Precinct Development Control Plan*, (which provides development objectives and controls across the whole of the area of Precinct 47), any reference to the *"Victoria Road Precinct"*, is a reference to all of the land within Precinct 47 of Marrickville Development Control Plan 2011. Accordingly, any reference to Precinct 47 within this plan also implies a reference to the *"Victoria Road Precinct"*. The area "K" within Amendment No.14 to Marrickville Local Environmental Plan 2011, for the purposes of this plan, is to be referred to as *"the contributing area"* – which is defined as the location of all land parcels and their respective property owners that are required to contribute to the infrastructure needs identified within this plan. Refer to Figure 7 on the next page.

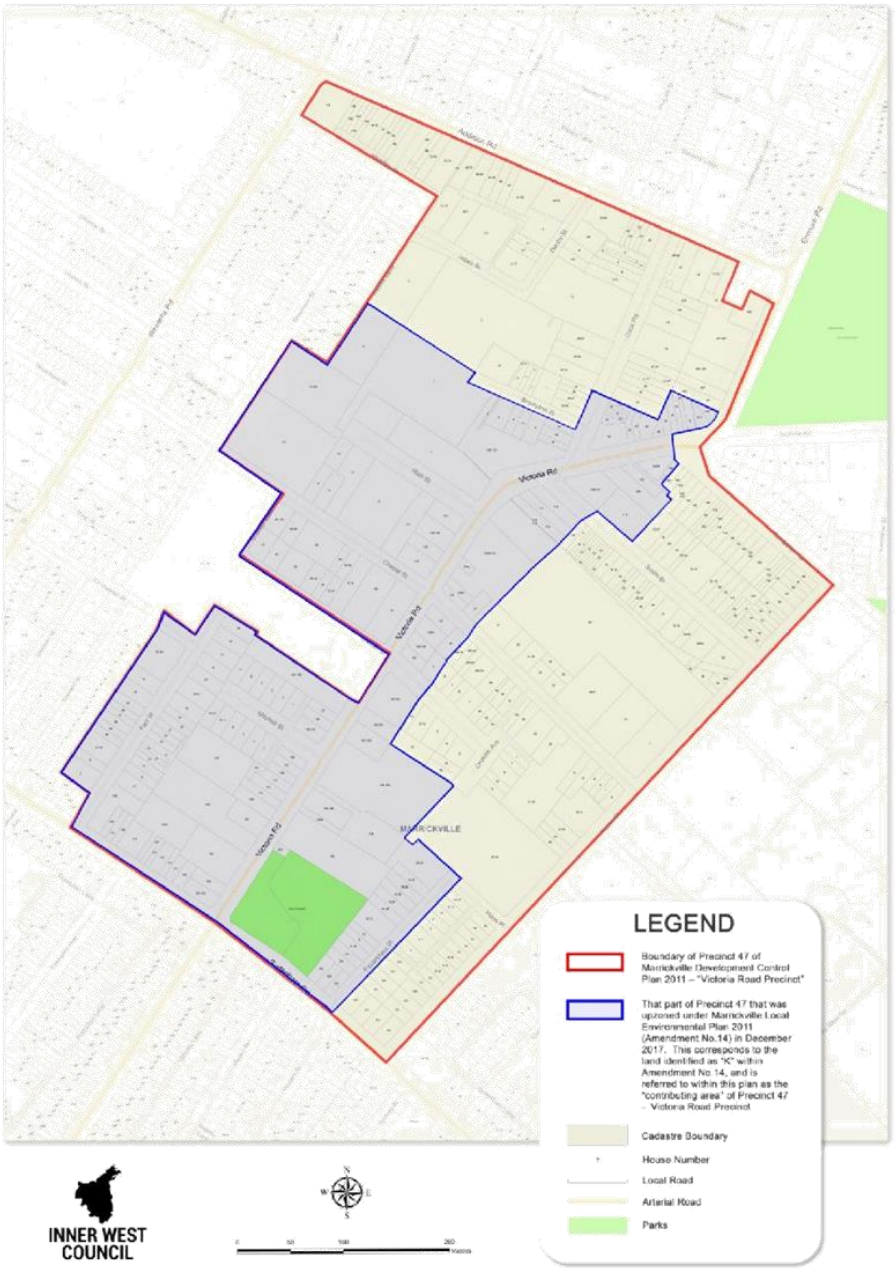


Figure 7 – Depiction of those parts of Precinct 47 that are required to contribute to the infrastructure works included within this sub-plan. Relevant developments within those parts of the precinct that are not in the "contributing area" would utilise the "Marrickville LGA other than Planning Precinct areas" table of the Marrickville Contributions Plan 2014.

2.4 Subsequent Expected Development within the Victoria Road Precinct and Previous Planning Approaches to the Provision of the Required Infrastructure

The New South Wales Government Planning & Environment, Planning Services – *Plan Finalisation Report* (dated 30 November 2017) for the draft Local Environmental Plan Marrickville Local Environmental Plan 2011 – Amendment No.14, in its summary of reasons for recommending that the Greater Sydney Commission's delegate determine to make this draft local environmental plan, outlined the expected new development likely to occur within Precinct 47 from the rezoning:

- *"Will facilitate up to 1100 dwellings in a well-serviced location that is close to public transport;*
- *Will provide capacity for an additional 6,000 jobs 5km from the Sydney CBD (there are currently 1,116 jobs in the precinct);*
- *Will revitalise the precinct by allowing for a more diverse range of emerging uses;[and]*
- *…provides for job and housing opportunities." (Page 13)*

As detailed above, this local plan amendment was made with an expectation from the NSW Government Planning & Environment Department that a full assessment of the new infrastructure needs of Precinct 47 i.e. upgrading of road networks; stormwater and flooding requirements; and responses to potential heritage issues, would occur at a later stage.

For example the *Plan Finalisation Report* noted on pages 4-6 that Transport for NSW (TfNSW) and the Roads and Maritime Services (RMS) "…[had] requested that a detailed traffic and transport assessment be prepared before finalisation of the plan to address the cumulative impact of the development on the surrounding local and regional network, including current and future public transport services."

The report also noted that the planning proposal proponent (Danias Holdings) had responded to these concerns predominantly through additional traffic modelling; and the lodgement of a revised Victoria Road and Sydenham Road Intersection upgrade design (which did not involve the use of land within the Wicks Public Park). The report also states that the proponent also advised the RMS; TfNSW; and the Department of Planning & Environment, amongst other things, that "…..*upgrades to the Sydenham Road and Victoria Road Intersection are only required once the precinct reaches approximately 20 per cent of its full development scenario; the development of the entire residential component of the precinct represents just 7% of the overall traffic generation; the proposed upgrades to this intersection are likely to be delivered ahead of the upgrade being necessary as they would be provided as part of the development of proposed residential sites at the southern end of the precinct; [and] a design solution for the upgrade of the Victoria Road/Sydenham Road intersection can be achieved to maintain the functionality of the intersection and respond to existing land constraints, avoiding the use of Wicks Park….."*

Other subsequent traffic and transport concerns from RMS and TfNSW concerning the form of the revised Sydenham and Victoria Road intersection design and its potential adverse impacts on network efficiency and pedestrian safety; and the need to identify funding responsibilities and associated funding mechanisms for the delivery of the required transport infrastructure upgrades; were consequently addressed by the NSW Planning and Environment Department via the inclusion of a road widening reservation within the draft local environmental plan (SP2 Infrastructure zoning) and via the inclusion of both a satisfactory (state infrastructure) arrangement clause (subsequently clause 6.18); and a clause which mandates a development control plan to be in place (prior to any development consents being issued for the rezoned area of the precinct) which addresses local infrastructure requirements (including heritage matters), (subsequently clause 6.17).

The Planning & Environment Department's reasoning for this infrastructure provision approach, for the planned upzoned land within Precinct 47, is explained on pages 6; 7; 8; and 12 of the *Plan Finalisation Report:*

"The satisfactory arrangements clause is intended to allow the proponent, the RMS and Council to establish a preferred intersection design [for] the Sydenham Road/Victoria Road intersection before granting consent to future development. The Department notes that the optimal intersection design for traffic and pedestrian safety may involve some public land, such as Wicks Park to provide appropriate lane widths and footpaths.

Further traffic analysis is not considered necessary, primarily because the planning proposal will be implemented over a 10-15 year time frame. Demands on the road system will therefore be gradual and will coincide with growth and change in the surrounding area.

The Department recommends that the draft LEP proceeds with outstanding objections as the matters identified by TfNSW and RMS can be dealt with when DAs [development Applications] are prepared for the site. The proponent has already provided two designs, for the Sydenham Road/Victoria Road intersection but requires further guidance from the RMS and cooperation from the Council to reach a satisfactory outcome. This is not considered a reason to delay the rezoning of the precinct.

…changes relating to the retention and provision of adequate open space, delivery of new laneways and connections and the preservation of identified potential heritage items in the precinct have not been supported. The draft LEP includes a clause which requires these matters to be addressed in the preparation of a precinct wide DCP. [Note: subsequent Clause 6.17 only required the Development Control Plan to relate to the rezoned areas of Precinct 47]

The provision of local infrastructure to support the planning proposal will need to be delivered through voluntary planning agreements (VPAs) or in accordance with a

Section 94 [Section 7.11] plan for the precinct which Council is yet to prepare. The proponent states that they offered to commence discussions on [the] VPA with Council when the planning proposal was submitted, but Council did not take this offer up. Council advises it has tried and failed to commence VPA negotiations during the public exhibition. There is an opportunity for future negotiations to occur during the DA process…..

…The draft DCP addresses development issues for the precinct that are not covered in the current Marrickville Development Control Plan 2011. The draft DCP provides detailed requirements for access and movement, public open space, stormwater management, built form, design, aircraft noise control, community facilities and heritage, but will need to be updated having regard to the matters required by the draft LEP…..The Department has [also] modified clause 6.17 of the draft LEP to ensure the DCP addresses drainage and flooding, the provision of open space and the impact of [the] development on public open space……

….Since Council was consulted on the draft LEP, the Department has included an SP2 zone at Sydenham Road and Victoria Road intersection to provide land for the intersection. Zonings for local infrastructure have not been included. The dedication of land in the precinct could have been managed by establishing a VPA with the proponent. The Department notes that the Council did not enter negotiations with the proponent during the preparation and exhibition of the planning proposal despite the proponent's offer to do so…"

This information has been included to provide context for the resultant commissioning of infrastructure investigative studies for the purposes of this sub-plan by the Inner West Council. A detailed investigation into why a *Planning Agreement* was not progressed between Inner West Council and the planning proposal proponent, by the time the abovementioned *Plan Finalisation Report* was prepared, has not been undertaken, for the purposes of this sub-plan. Although it is noted that resolving any infrastructure related land dedication needs for the planned rezoned areas of the precinct, would not have been achievable under a single planning agreement. Notwithstanding the existence of a single major landholder within P47 (the planning proposal proponent), not all of the land that was subsequently rezoned is in single land ownership, therefore, multiple (voluntary) planning agreements would be required to achieve this important local infrastructure objective.

Furthermore, the Inner West Council's officer views at that time, as contained within a report presented to Inner West Council at its meeting of 21 November 2017, was one of opposition to the draft plan amendment on the basis that "*it essentially leaves the assessment of the appropriateness of the subject planning proposal to a later stage, including the determination of many fundamental and substantive matters".* This viewpoint would have reduced the likelihood of Inner West Council in

engaging with the proponent, in a planning agreement process, prior to the making of the draft plan amendment by the NSW Government.

Generally, the Planning & Environment Department's traffic and transport infrastructure provision approach with the Victoria Road Precinct rezoning is consistent with the infrastructure approach identified within the proponent's previously mentioned, July 2016 *Planning Proposal Report* prepared by JBA Urban Planning Consultants Pty Ltd, with some exceptions. Contrary to the Planning & Environment Department's viewpoint that further traffic and transport infrastructure analysis is not required, JBA implied on page 75 of their *Planning Proposal Report* that further refinement (as likely informed by further analysis) of the traffic and transport infrastructure provision for the precinct, would be required over time:

"*…the Planning Proposal and Master Plan represent a 15-20 year vision for Precinct 47, and development of the precinct would occur incrementally over a sustained period of time in line with infrastructure improvements….Hyder note that without changes to the configuration of existing intersections, it is likely that additional peak hour traffic movements associated with the precinct would cause a deterioration of conditions in local intersections. To facilitate the proposed vision for Precinct 47, the intersection of Sydenham Road and Victoria Road would require improvements to add dedicated right-hand turn lanes to three of the existing approaches, which would be funded through local development contributions resulting from the renewal of the precinct….It is likely that the need for this upgrade would not be required until several stages of the renewal have been delivered. It is envisaged that further traffic management improvements (improved signal coordination, new road connections and intersections etc.) throughout the precinct would further improve traffic conditions without the need for any major intersection upgrades.*

It is envisaged that if Chapel Street and Rich Street are the major network access points for future development within the precinct then these intersections would require future signalisation to allow safe and efficient access to and from the road network for future businesses and residents…" (Page 75).

It is also interesting to note at this point that the previously mentioned infrastructure provision clauses within Amendment No.14 to Marrickville Local Environmental Plan 2011 (clauses 6.17 and 6.18) are typically utilised by the Department of Environment and Planning for Urban Release areas, as indicated on that department's website. In such situations, it is considered that the provision of local and State infrastructure is more straightforward and more readily quantifiable given that most of the required infrastructure doesn't already exist in the planned redevelopment area. In the area covered by this plan existing infrastructure will be utilised by the new development and a detailed assessment of the additional needs of the expected new development is required in conjunction with a thorough understanding of how the new required local and state infrastructure is to be funded and delivered. Given that the rezoned land comprises more than one owner it is considered that the only practical means

for delivering those additional local and State infrastructure needs is via a Section 7.11 Contributions Plan (such as this current sub-plan) in conjunction with planning agreements between developers within the precinct, and both the State and Inner West Council. At the time of the original drafting of this sub-plan, planning agreement negotiations were occurring (now executed) between the NSW Department of Planning and Environment (on behalf of RMS and TfNSW) and the planning proposal proponent – Danias Holdings, involving, in part, discussions on the funding; staging; and delivery of State related infrastructure within the precinct. i.e. including, but not limited to:

- *Provision of a left-turn slip lane from Sydenham Road (west) to Victoria Road (north); and*
- *Provision of a 90m right-turn bay along Victoria Road (north).*

Although not envisaged by the NSW Department of Planning and Environment, the proponent has commissioned additional traffic modelling since the making of Amendment No.14, to address the previously stated concerns of the RMS, specifically relating to the required upgrade of the intersection of Victoria Road and Sydenham Road along with the broader aim of satisfying the requirements of clause 6.18 of Amendment No.14. This additional assessment has directly informed ongoing discussions on the abovementioned planning agreement for the Victoria Road Precinct between the proponent; RMS; and the NSW Department of Planning.

An important incentive for the resolution of the contents of that planning agreement, for the proponent, is the removal of any State Department objections to their first development proposal for the upzoned precinct (located on property Nos.1-9 Rich Street, Marrickville). The lodgement of that first development proposal, following the gazettal of Amendment No.14, has also had implications on the timing of the finalisation of the Development Control Plan for the precinct, by Inner West Council, as will be mentioned below.

On 13 November 2017 the proponent lodged with Inner West Council a development proposal for a site in the northern portion of the precinct (Chapel Street Sub – Precinct) Nos. 1-9 Rich Street, to create (as provided within the description of the development proposal lodged with the development application):

"[The] construction of 3 new buildings in 2 stages incorporating ground level tenancies and upper level offices and car parking being the 3 storey North Hub building, 4 storey South Hub building and 5 part 6 storey Marker Building; use of the new buildings for a range of creative light industries, office premises and food and drink premises…."[8]

Clause 6.17 of Amendment No.14 to Marrickville Local Environmental Plan 2011 prohibits the approval of any new development applications for land within the upzoned areas of the Victoria Road. Accordingly, a prompt approval of the draft

Development Control Plan for the precinct was sought by the proponent, to facilitate an assessment and determination of their first redevelopment application for the precinct. This culminated in the subsequent adoption of the exhibited Victoria Road Precinct Development Control Plan, by the Inner West Council, in late August 2018.

Although the adopted development control plan for the precinct does give direction on the overall permitted form of the new development within Precinct 4, it does not give precise details of the full range; location; and type of new infrastructure that is now required to support the new permitted development; or their full costs; or the methods of how this infrastructure is to be delivered sustainably. Hence the need for this current sub-plan.

8 *Inner West Development Application No. DA 2017 00558 for 1-9 Rich Street, Marrickville – Description of the Development Proposal submitted with this Development Application.*

2.5 Methodology for the Identification, Costing and Delivery of the Required infrastructure for Precinct 47

As can be deduced from the above background to this sub-plan, a considerable body of research work relating to the planned increased development within Precinct 47 has been undertaken by consultants on behalf of the planning proposal proponent. Part of this work underpinned their completion of the draft development control plan for the Victoria Road Precinct, which was subsequently adopted by Inner West Council. The research needs of this plan extend beyond the information previously obtained through the proponent's own research work and the current development control information contained within Amendment No.14 and the adopted Victoria Road Precinct Development Control Plan (*VRP DCP*). For the purposes of this plan, precise details of all of the infrastructure required to support the new scale; form; location and type of land uses that are now permitted within P47, are required to be identified and fully costed. The completion of this work was necessary for the precinct to be redeveloped in an orderly and sustainable manner.

To this end, upon commencing this contributions plan project, key service providers within Inner West Council were consulted about the new infrastructure needs of the precinct, and for some areas, additional research studies were commissioned, to fully understand those additional infrastructure requirements of the precinct.

Open Space:

In July 2018, a meeting was held with relevant staff from the *trees; parks and sports fields* group of Council concerning meeting the needs of the expected increased employee and residential population within the Victoria Road Precinct. The conclusions of the staff relating to this matter are as follows:

- *The opportunity to purchase substantial additional open space areas within the precinct was lost when a major part of the precinct was upzoned in December 2017. Accordingly, it is considered that in the circumstances, it is*

best that the incoming employment and residential population to the precinct, contribute to the existing open space and recreation requirements contained within the Marrickville Section94/94A (now Section 7.11 and Section 7.12 respectively) Contributions Plan 2014;

- *No responsibility should be taken over by the Inner West Council of the relatively small publicly accessible open space areas which are to be provided within the VRP DCP, as they would likely require a level of maintenance which exceed their practical usefulness to the community within the precinct. Accordingly, these open space areas should remain in private ownership; and*
- *Given that these spaces would predominantly benefit the employees and residents that they are physically associated with, these developments should not receive a credit under this contributions plan for those privately owned, but publicly accessible, open space areas.*

Community Facilities:

Information obtained from Council's Social and Cultural Planning Staff during the preparation of this sub-plan, indicates that the current built form of P47, meets some of the important social and cultural needs of residents and employees of the Inner West. For example, P47 houses three (3) of the Local Government Area's (LGA) most significant live music venues: The *Red Rattler*, *Marrickville Bowling Club*, and the *Factory Theatre*.

Furthermore, the relatively lower cost, factory and warehouse spaces that presently exist within the precinct, have for a number of years, provided suitable large, versatile spaces for creative industries within the Inner West, particularly, for potentially large scale work, such as sculpture. Although this sub-plan does not specifically address these matters, it is important to note that it also does not preclude the potential delivery of some large creative industry spaces as part of the redevelopment sites, via a future voluntary *Planning Agreement* between the developers of precinct and Inner West Council.

Traffic and Transport Related Facilities:

To ensure that the portion of Precinct 47, that has been upzoned under Amendment No.14 to the Marrickville Local Environmental Plan 2011, is consequently developed in a safe; equitable; and sustainable manner; it is important that this sub-plan documents and costs all of the additional traffic and transport needs of the expected incoming employee and resident population, and shares these costs fairly, under the users pays principle that underpins this sub-plan.

As previously acknowledged, the proponent's traffic and transport consultants have undertaken a range of traffic and transport investigations within the precinct both before and after the Amendment No.14 rezoning occurred. It is important to acknowledge that all of their background data work and studies have been generously shared with Inner West Council staff, by the planning proposal proponent

and their consultants. The aim of this plan has to been to build on that prior knowledge to meet the specific needs of this contributions plan.

In this regard, it is important to note that the proponent's traffic and transport work post the finalisation of the Amendment No.14 rezoning, has been focussed on satisfying the requirements of the RMS and TfNSW, who have a more regional/state-wide focus than this current sub-plan.

This has been acknowledged by the proponent's traffic and transport consultant during the sharing of data with Inner West Council's traffic and transport consultant (more details of this is given below), who stated the following, by email dated Friday 12 October 2018:

"*..Please find attached the traffic reports & Sidra model for the Rich Street Marrickville precinct. Please note that our model is basically an update of the Arcadis model which RMS has reviewed previously. The key focus of our model is [to] address the issues raised by the RMS (on Arcadis model) by maintaining a reasonable capacity to the key signalised intersections in this precinct. Our Sidra model is now approved by the RMS.*

Our model has not necessarily focused on local context. Hence Cardno [The Inner West Council appointed traffic and transport consultant for this project] may need to prepare their own model to address Council's objectives/issues…."

In recognition of this situation and that none of the previous research work had directly resulted in the creation of a costed schedule of all of the required traffic and transport facilities within the precinct, potential traffic and transport consultants were approached by Inner West Council to undertake additional research on the precinct, with a view to providing for this plan:

A. *A definitive list of transport and traffic infrastructure improvements that are required to support the expected new development within the Victoria Road Precinct i.e. all traffic light installations; roundabouts; the precise width and nature of the required road and footpath widenings; pedestrian and bicycle path upgrades/installations etc.;*
B. *Indicative, costed designs for all of the required traffic and transport works to form part of a schedule within the Section 7.11 Development Contributions Plan for the precinct; and*
C. *An assessment of how much of these proposed works can be apportioned to the proposed redeveloped sites within the precinct.*

Cardno (NSW/ACT) Pty Ltd were subsequently awarded this work by Inner West Council on the basis that their approach utilised as much as possible of the proponent's consultant's previously collected traffic and transport data, whilst supplementing this body of work with some additional data collection and independent traffic modelling. They also offered the Inner West Council the greatest

surety of accurate infrastructure pricing by engaging a Quantity Surveyor to cost the required, key identified traffic and transport infrastructure items for the precinct, as part of their work.

The overall methodology of Cardno (*Traffic and Transport section*) referred to as Cardno (T&T) in the remainder of this plan, is summarised below:

(See diagram next page)

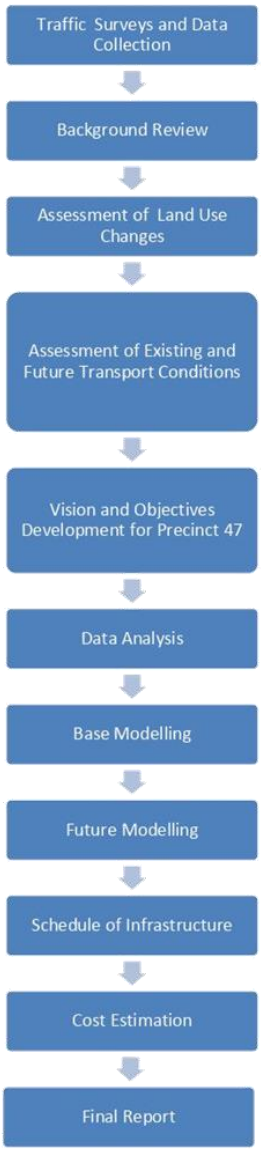


Figure 8 – A summary of the methodology of Cardno (T&T) in the completion of their "Precinct 47 Victoria Road Precinct - Traffic and Transport Infrastructure Needs Analysis - on behalf of Inner West Council – Dated 9 November 2018."

Further information on the work undertaken in some of these stages is briefly provided below:

Traffic Surveys and Data Collection:

As previously mentioned, Cardno (T&T) sought to use as much as possible of the previous traffic data collected by the proponent's consultants which had been shared with Cardno (T&T). In this regard, PTC (the latest traffic and transport consultancy utilised by the proponent), provided survey data for eight (8) locations within the Victoria Road Precinct across two days in 2017. For the purposes of their work for this plan, Cardno (T&T) undertook additional partial surveys at four intersection sites of the precinct (not previously surveyed) and undertook a resurvey of one site previously surveyed for calibration purposes. The additional sites surveyed included the following intersections:

- *Chapel Street and Fitzroy Street;*
- *Farr Street and Sydenham Road;*
- *Fitzroy Street and Sydenham Road; and*
- *Illawarra Road and Addison Road.*

Furthermore, other data collected, included, but was not limited to: Journey to work data; Household travel survey data; additional SCATS (Sydney Co-ordinated Adaptive Traffic System) traffic volume data information; IDM (Intersection Diagnostic Monitor) information; and TCS (Traffic Control Signal) plans for six (6) key sites within the precinct obtained from the RMS.

Background Review:

This stage included a site visit and background document review with a view to observing and documenting traffic and transport behaviour; key walking and cycling routes; key land uses in the precinct and significant place destinations; critical travel routes and intersections; gaps in the transport network; and way finding.

A comprehensive review of all State; regional; and locally focused literature (and plans) affecting the precinct was also undertaken by Cardno (T&T), including, but not limited to the Marrickville Bicycle Strategy 2007; Henson (Area 9) Local Area Traffic Management Report 2016; Marrickville East (Area 10) Local Area Traffic Management Report 2016; Sydenham Station Precinct Masterplan; Marrickville Metro Shopping Upgrade; Black Spot funding plans for the intersection of Chapel Street and Victoria Road, etc.

Assessment of Land Use Changes:

Utilising research and design work previously undertaken by the proponent's traffic and transport; architectural; and planning consultants; relevant Inner West Council documents including the development controls for the precinct under Amendment No.14 and the adopted *VRP DCP*, Inner West Council strategic planning staff prepared a breakdown of expected location; scale; form; composition; and uses within the upzoned areas of Precinct 47 which was supplied to Cardno (T&T). This information was consistent with information previously prepared by the proponent's

consultants and forwarded to the NSW Department of Environment & Planning to support the rezoning of the precinct.

Vision and Objectives Development:

To guide their traffic modelling work, Cardno (T&T) prepared a transport vision and traffic and transport objectives for Precinct 47 utilising, in part, the transport objectives for the precinct which had already been broadly developed within existing Inner West Planning documents i.e. Community Strategic Plan – Our Inner West 2036; Inner West Council Delivery Program 2018 – 2022; and the Victoria Road Precinct (Precinct 47) Development Control Plan amendments to Marrickville Development Control Plan 2011. For the purposes of this summary, details of the adopted transport vision are provided below.

"*Adopted transport vision:*

A highly accessible precinct that supports and encourages movement and access through a proportionally high use of sustainable transport modes while providing for the need of a good level of service for vehicle movement and access."

In terms of Level of Service (LoS) within the vehicular network of Precinct 47 it was the firm view of relevant Council staff consulted during the preparation of this study that the current level of service should be maintained (not worsened) arising from the increased development within the precinct.

Stormwater and Flood Mitigation Related Facilities:

As part of its ongoing flood risk management responsibilities pursuant to the NSW Floodplain Management Manual requirements, Inner West Council engaged Cardno (Water Infrastructure Section) referred to as Cardno (WI) in the remainder of this plan - to undertake the *Marrickville Valley Flood Risk Management Study and Plan (Marrickville Valley FRM Study and Plan)* in 2015. The Draft Marrickville Valley FRM Study and Plan was endorsed by the flood management advisory committee in December 2017 and subsequently presented to Inner West Council for its endorsement in April 2018, at which time it was adopted by Council.

Likely due to the uncertainty around whether the rezoning of the Victoria Road Precinct was to be supported by Inner West Council or not, when the main work on the *Marrickville Valley FRM Study and Plan* was being undertaken, that study did not address the now permitted increased development activity within the precinct. Hence the need for this present water infrastructure study, for the purposes of this sub-plan.

Whilst it is appreciated that the proponent's water management consultants, both for the original planning proposal for the precinct and more recently, to support the assessment of the development proposal for Nos. 1-9 Rich Street, Marrickville, have undertaken considerable research work on this topic, those studies were prepared for specific purposes relating to the acceptability/suitability of the planning and

development proposals, from a stormwater and flood management perspective. For example, for the purposes of the original planning proposal for the precinct, the proponent engaged WMA water consultants to undertake *"…an [assessment]…of flooding impacts on individual sub-catchments within the precinct based on the suitability of each sub-catchment for residential development [as shown in Figure 10]."* [9]

In making this assessment WMA water acknowledged that *"Precinct 47 is flood affected by overland and mainstream flows related to the Marrickville valley catchment, but is also partially affected by the Cooks River in the PMF event [Probable Maximum Flood]."* [10]

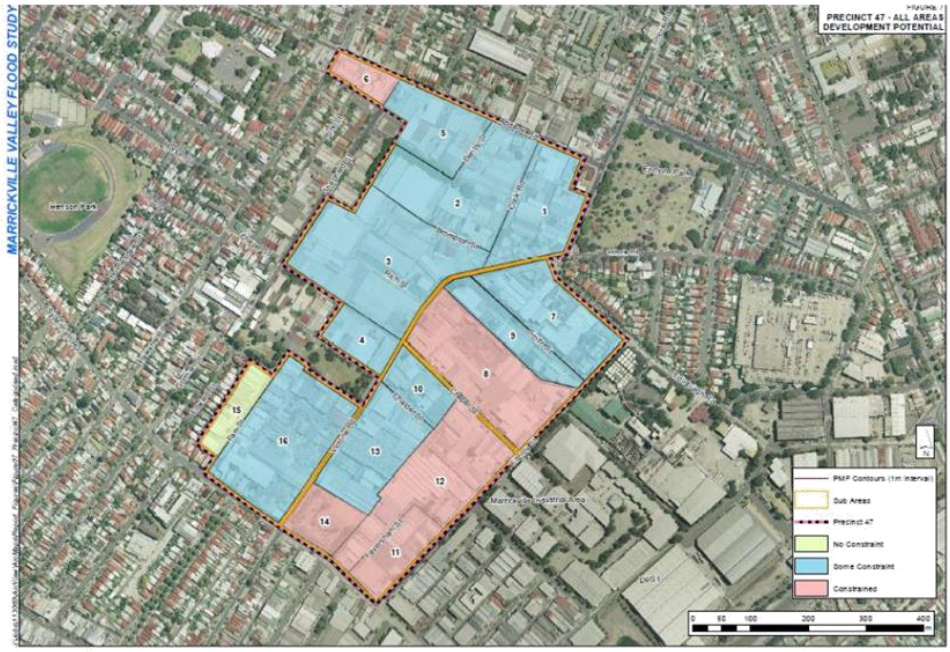


Figure 9 – Flooding constraints on Precinct 47 Development Potential. Final page of Webb, McKeown & Associates Pty Ltd (trading as WMA water) Precinct 47 – Flood Liability Report dated 13 September 2013. Note: this diagram is also reproduced on page 92 of the *JBA Victoria Road Precinct, Marrickville, Planning Report, July 2016.*

By comparison, the Cardno (WI) Final Floodplain Risk Management Study - Marrickville Valley Floodplain Risk Management Study and Plan prepared for Inner West Council 6 September 2017, was completed "…*to define the existing flooding behaviour and associated hazards within the Marrickville Valley Catchment, and to investigate possible mitigation options to reduce flood damages and risks. The tasks were undertaken together with stakeholder and community consultation to ensure that their concerns were addressed. The overall objective of this study is to develop a FRMP [Floodplain Risk Management Plan] that addresses the existing, future and*

continuing flood problems, taking into account the potential impacts of climate change, in accordance with the NSW Government's Flood Policy, as detailed in the Manual (NSW Government,2005)….. (Pages iii and iv)

…..The NSW Government Flood Prone Land Policy is directed towards providing solutions to existing flood problems in developed areas and ensuring that new development is compatible with the flood hazard and does not create additional flooding problems in other areas. Under the policy, the management of flood prone land is the responsibility of Local Government…(Page iii)

….The overall recommendations of this study find that it is impractical to eliminate all flood risks from the study area. Instead, the aim of the recommendations of this FRMS [Flood Risk Management Study] is to ensure that existing and future development is exposed to a reduced level of risk…" (Page vi)

Given their experience with the completion of the most recent Marrickville Valley Floodplain Risk Management Study and Plan (MVFRMS & MVFRMP) Cardno (WI) were engaged by the Inner West Council, for the purposes of this plan, to assess the need for infrastructure, related to stormwater and flooding, that is required to support the new permitted development within Precinct 47. The study also aimed to give consideration to potential funding mechanisms for any required water related infrastructure within the precinct.

This independent study, in essence, was considered to be an update/extension of the Marrickville Valley FRM Study as it relates to the Victoria Road Precinct, in response to the increased level of business and residential development now permitted within the precinct under *Marrickville Local Environmental Plan Amendment No.14.*

The stages of this study are briefly summarised within the following table:

(*See diagram next page*)

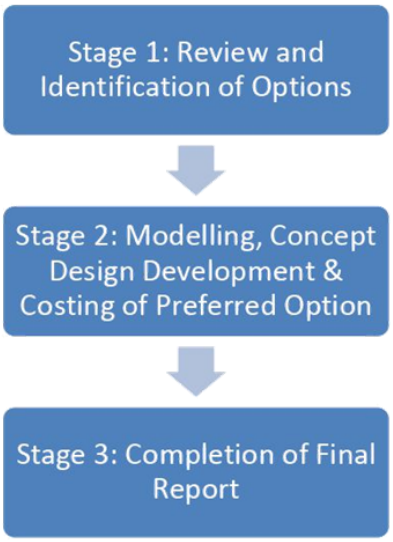


Figure 10 – A summary of the methodology of Cardno (WI) in the completion of their "*Flooding and Stormwater Advice – Victoria Road Precinct Developer Contributions Plan – dated 27 November 2018*" report on behalf of Inner West Council.

A breakdown of the content of each of these stages is provided below:

Stage 1 – Review and Identification of Options:

- Involves a review of the Marrickville Valley FRMSP and a review of the relevant 'On Lot' Development Controls within the Marrickville Development Control Plan 2011;
- Identification of preliminary infrastructure options for the precinct after giving consideration of the details of expected new development within the precinct (supplied by Inner West Council); and
- Consideration to be given to whether the inclusion of *On Site Detention* (OSD) will be of benefit in the Victoria Road Precinct, with the results of this assessment to be provided within Stage 3 – Final Report.

Stage 2 – Modelling, Concept Design & Costing of Preferred Option(s):

- Four (4) preliminary options were identified and discussed with Inner West Council;
- One of these options was discarded given its potential impact on other public facilities - i.e. public open space;
- Following a series of modelling exercises, a preferred option was identified which was subsequently brought to a concept design;
- This concept design was then costed.

Stage 3 – Completion of Final Report:

- Although not originally foreseen, additional potential water related infrastructure options were prepared to avoid potential land acquisition costs; to achieve perceived better flood mitigation results; and to address the verbal concerns of Sydney Water in relation to adding more pressure to their assets within the locality. These additional options were also modelled and the final chosen design for the infrastructure work was fully costed.
- A final report was prepared which includes a justification for this work.

Arising from the subsequent public exhibition of this sub-plan (during the months of) public concerns were raised regarding: the perceived excessive cost of the water infrastructure work (included within the former draft of this sub-plan); its perceived limited benefits for new development within the precinct; and the perceived unfairness of having the upzoned areas of the precinct pay for 100% of the total cost of the proposed infrastructure work, when the modelled results clearly indicated that the likely benefits extended beyond the confines of the precinct.

As a result of the seriousness of these concerns it was considered appropriate that a peer review be undertaken of the Cardno (WI) study. Given their recent and previous work within the Marrickville Valley, GRC Hydro (GRCH) were chosen to undertake the peer review. Utilising additional modelling information, the peer review echoed the concerns about the effectiveness of the proposed high cost water infrastructure solution proposed in the Cardno study, having regard to the unique characteristics of the Marrickville valley flooding and stormwater management system as set-up by Sydney Water.

Accordingly, GRCH were engaged by IWC to further investigate potential alternative means for minimising stormwater and flooding risk arising from the likely future increase in residents; employees and visitors, within the precinct. To help with these investigations Sydney Metro were approached for permission for GRCH to utilise the most comprehensive water related model available for the Marrickville Valley – The Sydney Metro model. This permission was obtained from Sydney Metro for the use of that model which is gratefully acknowledged.

Arising from the use of the Sydney Metro model, two potential alternative schemes were developed for reducing stormwater/flooding risk within the precinct, which are briefly described below:

1. *Substantially increasing the water storage on certain redevelopment sites so that risks to residents; employees; and visitors, within the precinct; and beyond; are minimised during significant storm events; and alternatively; and*
2. *Providing a substantial communal water storage scheme beneath Wicks Park.*

The potential incorporation of either of these schemes, however, were discounted on both practical and cost grounds (*Option 1* - predicted to cost in excess of $100M and *Option 2* - predicted to cost in excess of $40M and additionally would have necessitated the removal of all of the existing mature vegetation within the park).

Accordingly, an alternative approach was undertaken to manage flooding and stormwater risk within the precinct through additional controls within the *VRP DCP*.

These controls ensure that all redevelopment sites within the upzoned areas of the precinct consider their cumulative impact on downstream properties (this is to ensure there is no net loss of stormwater storage on their sites compared to existing conditions) and for revised standards for basement parking entries above the PMF – *Probable Maximum Flood* level , where appropriate, (commensurate with standards used in the City of Sydney), to be adopted, in conjunction with the completion of additional modelling information from GRCH.

9 Planning Proposal Planning Report - Victoria Road Precinct, Marrickville. Planning proposal for land uses and development standards – submitted to Marrickville Council on behalf of Danias Holdings. Prepared by JBA Urban Planning Consultants Pty Ltd and dated July 2016. Report No.1350. Page 91.

10 Precinct 47 – Flood Liability Report by Webb, McKeown & Associates Pty Ltd (trading as WMA water) dated 13 September 2013. Page 1.

2.6 Infrastructure Needs Studies Results (Nexus and Apportionment)

2.6.1 Necessary Infrastructure works within P47:

As can be seen in the schedule section of this sub-plan (Section 1.4) no communal water infrastructure works have been included within this sub-plan (only the costs of the water infrastructure investigations), instead a suitable response to the flooding and stormwater environment within P47 is to be achieved through amendments to Section 9.47 Victoria Road Precinct component of the Marrickville Development Control Plan.

Furthermore, approximately $0.6M of public traffic and transport infrastructure works are required to be implemented to ensure that the increased permitted development within P47 can be absorbed into the locality without the existing level of service within the road network of P47 being worsened.

Other potential traffic and transport works for the precinct, which were identified by Cardno (T&T) in their traffic and transport needs study for the precinct, have not been included within this sub-plan, on the basis that they are best dealt with by individual or amalgamated developments as they are to be located on private land and they predominantly relate to both vehicular and pedestrian access issues within the precinct. This decision was also made on the basis that a significant proportion of these additional works are aimed to satisfy the requirements of the Roads and Maritime Services, who “will not permit direct vehicular access to/from development

via Sydenham Road and Victoria Road. Access to the road network should be provided via rear lanes or local roads."[11] These additional works are identified within the accompanying Development Control Plan for the precinct.

One additional cost has also been added to the traffic and transport works schedule of this sub-plan which was not identified by the Traffic and Transport Consultant, such as an inclusive access study (principles and practical design advice for the private and public domain) within the precinct. This item was included on the grounds that a significant proportion of this new resident and employment population within the precinct will likely include persons with mobility restrictions.

Furthermore, not all of the proposed traffic and transport works will be fully paid for by developers, in the upzoned areas of P47. Some of the items have a wider benefit, beyond P47, so the developers only have to pay for their share of these identified items. E.g. the proposed signalisation of the Fitzroy and Sydenham Road intersection. This and other apportioned works will result in the Inner West Council being committed to an approximate additional expenditure of $655,150 for additional traffic and transport related works in the precinct over the next ten – fifteen years. The provisions of this sub- plan would not preclude these funds being obtained from other sources e.g. grant funds etc. in the future. Further comments on *apportionment* are provided in the next section of this sub-plan.

It is important to acknowledge that the total amount of traffic and transport works to be paid for by the developers of the upzoned areas of the precinct, would have been higher, however, Inner West Council was recently successfully awarded *"Black Spot Funding"* for the imminent installation of new traffic lights at the intersection of Chapel Street and Victoria Road by RMS. This will be implemented without the use of any developer contribution funding. Furthermore, these works are separate from the Victoria Road/ Sydenham Road Intersection Upgrade works currently being negotiated (as part of a voluntary Planning Agreement) between the proponent; Transport for NSW (TfNSW); Roads and Maritime Services (RMS) and the Department of Planning and Environment (DPE).

11 *New South Wales Roads and Maritime Services Department – Correspondence from Greg Flynn (Senior Manager Strategic Land Use – Sydney Planning, Sydney Division to The General Manager – Inner West Council Re: Public Exhibition Amendments to the Marrickville Development Control Plan (MDCP) DCP for Victoria Road Precinct, Marrickville - dated 13 July 2018 – Page 4.*

2.6.2 Credits:

Although the parent contributions plan does not contain a specific section on contribution credits, the schedules within the plan imply that a credit system applies to the plan. E.g. the updated schedules for the parent contributions plan state that credits for residential development are capped at $20,000. In practice, credits are given for the existing floor area of non-residential land uses on redevelopment sites covered under the parent contributions plan. This system is not proposed to be altered under this sub – plan.

However, in determining realistic contribution amounts for the required traffic and transport and water infrastructure facilities within P47, it was important to determine the likely credits to be achieved within the contributing area, on a per resident/ employee basis, so this could be subtracted from the expected contributing population.

To determine the likely residential and non-residential credits across the upzoned areas of P47, use was made of the Precinct 47 Land Use Survey completed by Danias Holdings Pty Ltd in May 2014. (This survey was included as Appendix M of the JBA Victoria Road Precinct, Marrickville, Planning Report, July 2016).

The survey identified, amongst other things, all of the existing dwellings within the upzoned area of the precinct so that the likely credits from these dwellings could be factored into the contribution calculations using the relevant occupancy rates within parent plan. For non-residential uses the previous applicable floor space ratio was utilised to determine the maximum credit that would be available to redevelopment sites within the precinct. This was obtained using the previously mentioned expected development study to obtain the relevant site areas and then to determine the likely maximum existing floor area permitted under the former floor space controls. This information was then converted to a per employee figure by applying the relevant occupancy rate within the parent contributions plan. These residential and employee totals were then subtracted from the previously mentioned expected development totals to achieve a *net contributing population* (residential and non-residential) with which to share in the cost of the required traffic and transport and water infrastructure facilities within the precinct. (See Section 3.4 Calculation of Contributions for this sub – plan for further information).

Also included within the credit calculations has been the recently approved redevelopment at Nos.1-9 Rich Street, Marrickville (located within the upzoned area of P47), because it will not form part of the developments within the upzoned area of the precinct that will be contributing to the specific P47 infrastructure related items within this sub-plan.

2.6.3 Apportionment:

As mentioned previously, the "contributing area" for these new contributions corresponds to the area "K" within the LEP amendment for the Victoria Road Precinct – the upzoned area – See Figure 7 on page 21.

The "contributing area" of Precinct 47 is only to pay towards the traffic and transport upgrades within Precinct 47 – not for any traffic facilities beyond the precinct to avoid potentially double-dipping. The "contributing area" will continue to meet its existing Marrickville Contributions Plan 2014 commitments for Recreation Facilities, Community Facilities, and Plan Administration Fund, after monies are first captured

for the *critical infrastructure items* for the precinct – *Traffic and Transport and Water Infrastructure Investigations*.

All redevelopment sites within the contributing area will contribute to the monetary cost of the new traffic and transport works (occurring on government land) on the basis by which they are expected to utilise the existing traffic network (expected traffic generation) – see section 3.4 for further discussion on this matter. It is expected that the land uses that generate the most traffic (or in other words use the traffic and transport network the most) will pay for the greatest share of the traffic and transport upgrades. These works have been costed by the Traffic and Transport Consultant – Cardno T& T & T in conjunction with a Quantity Surveyor Sub – consultant.

The cost of the necessary water infrastructure investigation work ($112,365) is to be shared equally on a per person basis (equal new employee/equal new resident basis) using the predicted number of total new employees and residents (derived from the proponents previous masterplanning studies; using considered assumptions from Cardno (T&T); and using occupancy rates within the existing Marrickville Contributions Plan 2014). The per person rate was then derived by dividing the total costs of the water infrastructure investigative studies by the expected total number of new persons within the upzoned areas of the precinct (over 6,000 new persons are expected within the upzoned areas of the precinct).

In calculating the contribution rates for the traffic and transport and water infrastructure facilities, as previously detailed, a reduction in the effective number of expected new residents and employees that would be contributing to these works, was factored in, to take account of the likely credits that could be achieved by new developments within the area and a recently approved development within the upzoned area of the precinct.

Those parts of Precinct 47 that are redeveloped in the future, that were not upzoned with the LEP Amendment for the precinct, would continue to pay the "Marrickville LGA other than the planning precinct areas" contribution rates within the Marrickville Contributions Plan 2014.

2.6.4 Nexus:

The previously identified flooding characteristics of precinct 47 necessitated the engagement of water engineering consultants to investigate the need for, or otherwise, of any necessary water infrastructure works required to support the permitted increased development within the precinct. In the circumstances, it is considered reasonable that new developments within the precinct equally share in the total costs of those investigations.

The justification/nexus for the proposed traffic and transport contribution for the precinct, provided by the Traffic and Transport Infrastructure consultant, is as follows:

"[*Without the required traffic and transport road upgrades] "The road network comes under considerable demand pressures, Addison Road and Illawarra Road fails in the PM peak period, Sydenham Road and Victoria Road fails in both AM and PM peak periods, as does Victoria Road and Chapel Street. These intersections need upgrades to improve the forecast level of service relative to its existing operation."*

"There are three intersections [mentioned above] which fail as a result of the development uplift and need to be subject to upgrades to meet one of the project objectives, which is that "as a minimum, the current level of service should be maintained within the precinct with the increased development, now permitted under the rezoning. The precinct should be no worse off, from a traffic and transport viewpoint, with the increased development".

"The modelling suggests that the intersection of Sydenham Road and Fitzroy Street is already, and will continue to be under capacity constraints. Whilst this intersection has not been modelled in terms of an upgrade, it has been strategically costed as an infrastructure line item as outlined in Section 7.2. There are various levels of intersection function improvement at Addison Road/Illawarra Road, Sydenham Road/Victoria Road and Victoria Road/Chapel Street which result from the infrastructure upgrades described in Table 5-12."

"The rectifications outlined above are forecast to improve the level of service of the intersections to broadly in line with existing conditions, meaning that with the uplift and the intersection improvements, it is expected there should be negligible net change in the function of the road network."

2.7 Definitions/ terms used within this Sub - plan

"Act" means the *Environmental Planning and Assessment Act 1979*

"Apportionment" is a process which seeks to define the demands of all those who may benefit from the provision of a public facility to ensure the contributing population only pays for its share of the total demand.

"Contributing area" means the area described in Figure 7 of this sub-plan which shows all of the landowners within the upzoned areas of the Victoria Road Precinct (Precinct 47) that are required to contribute to the critical infrastructure works/studies for Precinct 47. The "contributing area" corresponds to the area "K" identified within the Marrickville Local Environmental Plan 2011 (Amendment 14) for the precinct.

"Contribution" means the same as "**development contribution**";

"Contributions plan" means a contributions plan referred to in the Act.

"Council" means the Inner West Council.

"Critical infrastructure" for the purposes of this sub-plan includes: *traffic and transport infrastructure* (located on government owned land); and *flooding and stormwater management (subsequently includes only the water infrastructure investigative studies)* as identified by the infrastructure needs studies which underpin this sub-plan.

"DCP" means a Development Control Plan adopted by Council under the Act.

"Development consent" means consent under Part 4 of the Act to carry out development and includes, unless expressly excluded, a complying development certificate.

"Development contribution" means the making of a monetary contribution, and /or the dedication of land, or the providing of a material public benefit (including a work-in-kind), or any combination of these as referred to in the Act for the provision of community infrastructure;

"LEP" means a Local Environmental Plan made by the Minister under the Act.

"LGA" means the Local Government Area.

"Material public benefit" means a facility or work which is offered by a developer as a finished entity either in return for a reduction in the amount of monetary contributions required for the same category of contribution or as an additional or partial additional benefit under a planning agreement.

"Minister" means the Minister administering the *Environmental Planning and Assessment Act 1979*.

"Nexus" refers to the relationship between the expected types of new development in an area and the demand for additional public facilities generated by that new development. The power to levy a contribution (pursuant section 7.11 of the "Act") relies on there being a clear nexus between the development being levied and the need for the public amenity or service for which the levy is required.

"Parent Contributions Plan" means the existing Marrickville Section94/94A Contributions Plan 2014.

"Planning agreement" means a planning agreement referred to in the Act.

"Public and Financial Accountability" These are considered crucial components of the making and administration of contribution plans. Contribution plans are required to:

- Follow the precise legislative requirements regarding the preparation of the plan;
- Be transparent as to the manner in which the strategies and contribution rates were derived; and

- Be open to public scrutiny in the collection, accounting and expenditure of contributions.

"Public Benefit" means a benefit enjoyed by the public as a consequence of a development contribution.

"Reasonableness" means the responsibility placed upon Council by the development contributions system in NSW to determine what is reasonable and to use section 7.11 of the "Act" in a reasonable manner.

"Regulation" means the *Environmental Planning and Assessment Regulation 2000.*

"Sub-plan" means this amendment to the existing Marrickville Contributions Plan 2014 which provides specific background and details of the contribution rates for the upzoned areas of Precinct 47 – the Victoria Road Precinct.

"Staged development" means a development that is carried out in accordance with Division 2A of Part 4 of the EP&A Act. It also means a development that is carried out in accordance with Section 80(5) of the EP&A Act as it used to exist prior to its repeal on 30 September 2005.

"State Government Cap" Pursuant to reforms to the NSW development contributions system, undertaken in 2008, infrastructure contributions payable to local councils have been capped at $20,000 per residential lot. All contributions exceeding $20,000 require approval from the Minister for Planning. The introduction of the threshold was effective as of 30 April 2009, as provided for in the Minister's direction under s94E of the EP&A Act, dated 13 January 2009. Accordingly, for those residential uses that are subject to the "cap" under this sub-plan, irrespective of the total contribution amount listed in the contribution schedule of this sub-plan, the applicable contribution shall not exceed $20,000.

"The proponent" means the original planning proposal proponent for the Victoria Road Precinct – Precinct 47 – Danias Holdings Pty. Ltd.

"Victoria Road Precinct Development Control Plan" means the Victoria Road Precinct (Precinct 47) Amendments to the Marrickville DCP 2011 and dated April 2018 or as later amended.

"Work-in-kind" means the carrying out of work by the applicant as nominated in the work schedule of the contributions plan in return for a reduction in the amount of monetary contributions (but not a reduction in the total quantum of contributions) required for the same category of contribution.

Section 3 – Administration and Accounting:

3.1 How to use this Sub-plan

This sub-plan provides the background to and the specific contribution rates for redevelopment sites within the upzoned areas of the Victoria Road Precinct (P47).

Those parts of Precinct 47 that are redeveloped in the future, that were not upzoned with the LEP Amendment for the precinct (Amendment No.14), are required to continue to pay the *"Marrickville LGA other than the planning precinct areas"* contribution rates within the parent contributions plan – Marrickville Contributions Plan 2014.

This sub-plan also provides up to date provisions relating to the payment of contributions and a set of definitions/terms that are specific to this Sub – plan.

3.2 Relationship with other Plans and Policies

All other aspects of the parent contributions plan apply to contributing developments within Precinct 47, including, most importantly, the provisions relating to the indexing of contribution rates, which are to be applied identically to the contribution rates detailed within this sub-plan, with one exception. Within the contributions schedule for this sub-plan, in the setting of contribution rates which exceed the "State Government *Cap"* money is to be collected first for the critical infrastructure items mentioned within the contributions schedule for this sub-plan.

3.3 Implementation of this Sub- plan

The collection and expenditure of contribution funds will be closely monitored during the life of this sub-plan to ensure the orderly delivery of the schedule of infrastructure works included within this sub-plan.

3.4 Calculation of Contributions for this Sub-plan

Traffic and Transport Contribution Calculations:

Principles:

- All upzoned areas should share in the costs of the traffic and transport upgrades located on government land within Precinct 47 which are required to support the new scale of development now permitted on their lands (known as the contributing area – (See Figure 7 on page 21 of this sub-plan).

- The traffic and transport upgrades included within this plan are not going to improve the general functioning of the traffic and transport network within the precinct, they will just ensure that the upgrades keep pace with the increases in employees and residents now permitted within the precinct so that the

functioning of the traffic network does not get any worse than how it presently functions.

- In order to determine the realistic value of funds that can be obtained from the contributing employee and resident population for these traffic and transport works under this sub-plan, an assessment has been made of the likely credits to be achieved by the redevelopment sites within the upzoned areas of P47 expressed as numbers of employees/residents and then this has been subtracted from the expected total expected contributing population for these works. (See also section 2.6.2 Credits – of this sub-plan).

- Hourly traffic generation totals (AM + PM) for the broad land use categories as determined by Cardno (T&T) have been utilised to determine how the costs for the traffic and transport upgrades are to be shared amongst the incoming employee and residents. Based upon this approach, it is expected that the land uses that generate the most traffic (or in other words use the traffic and transport network the most) will pay for the greatest share of the traffic and transport upgrades. (See calculations below).

Figure 11 – Assessment of the impact of the major expected land uses on the Victoria Road Precinct Traffic and Transport Network to help determine the apportionment of Traffic and Transport upgrade costs between these uses.

Major identified traffic generating uses[1]	Future Hourly Traffic Generation Calculated Totals[2] (AM + PM)	% of total future hourly traffic generation (rounded up or rounded down as appropriate)[3]
Residential	374	11.26%
Commercial	2093	63%
Retail	473	14.24%
Hospitality	380	11.5%
Totals	3,320	100%

Notes for Figure 11:

1. *Major traffic generating use categories as determined by Cardno (T&T) for the purposes of their recent traffic modelling of the Victoria Road Precinct.*
2. *Future hourly traffic generation movement totals for the identified major traffic generating uses as determined by Cardno (T&T) for the purposes of their recent traffic modelling of the Victoria Road Precinct combining the AM with the PM totals for each of these uses. See Table 5-4 Future traffic Generation on page 36 of Precinct 47 – Victoria Road Precinct Traffic and Transport Needs Analysis Cardno November 2018. The total figure at the bottom of the column is the sum of each of the hourly future traffic generation totals 374 + 2093 + 473 + 380 = 3,320 future hourly traffic movements.*
3. *Percentage of the total of future hourly traffic movements. This was obtained by dividing the future hourly traffic generation totals for each of the identified land uses by the combined future hourly traffic*

generation total of all of the identified land uses (3,320) to get the percentage (%) share of total traffic upgrade costs for each major land use category. E.g. for residential = 374 ÷ 3,320 x 100 = 11.26 %.

Figure 12 – Apportionment of Traffic and Transport upgrade costs between the main expected uses within the up - zoned areas of Precinct 47, based upon traffic generation information from Figure 11.

Major identified traffic generating uses.[1]	% of total future hourly traffic generation within the precinct (rounded up or rounded down as appropriate)[2]		Resultant % share of the total cost traffic and transport infrastructure upgrades required within the Precinct. (rounded up or rounded down as appropriate)[3]
Residential	11.26%		$33,434.1
Commercial	63%		$187,065
Retail*	14.24%	25.74%	$76,429.4
Hospitality*	11.5%		
Totals	100%		$296,928.50

Notes for Figure 12:

1 *Major traffic generating use categories as determined by Cardno (T&T) for the purposes of their recent traffic modelling of the Victoria Road Precinct. NB *To ensure compatibility with the form of the current Marrickville Contributions Plan "Marrickville Section 94/94A Contributions Plan 2014" of which this plan forms a part of, the traffic generation rates for the 'retail' and 'hospitality' land use categories have been combined to create a single total for these combined uses i.e. (Retail (14.24%) + Hospitality(11.5%) = 25.74%).*

2 *Future hourly traffic generation movement totals for the identified major traffic generating land uses as determined by Cardno (T&T) for the purposes of their recent traffic modelling of the Victoria Road Precinct. These were obtained by combining the AM with the PM hourly traffic generation totals for each of these uses. The total figure at the bottom of the column is the sum of each of the hourly future traffic generation totals 374 + 2093 + 473 + 380 = 3,320 future hourly traffic movements within the precinct.*

3 *Percentage share of the total cost of the traffic and transport infrastructure upgrades required for the Victoria Road Precinct, for each of the land use categories, obtained by multiplying the relevant land use traffic generation percentage by the total cost of the works to be attributed to developers ($296,928.50).*

Residential Contribution Rate – Traffic and Transport Infrastructure Works.

To determine the individual traffic and transport contribution rates for residential developments within the precinct, the number of existing residents within the upzoned areas of the precinct* (which will be given a credit under this sub-plan up to but not exceeding the existing residential cap of $20,00 per dwelling) was subtracted from the expected number of residents in the upzoned areas of the precinct (2004 persons) (previously mentioned in the *expected development section* elsewhere

within this document) (i.e. 2004 persons – 120.12 persons = 1883.9 – Net population increase).

Note*: This was derived from information within the Precinct 47 Land Use Survey completed by Danias Holdings Pty Ltd in May 2014. (This survey was included as Appendix M of the JBA Victoria Road Precinct, Marrickville, Planning Report, July 2016).

The residential percentage share of the total costs of traffic and transport infrastructure works for the precinct ($296,928.50 x 11.26% = $33,434.1) was then divided by the net expected increased residential population to obtain the *per resident* contribution rate for these infrastructure works.

e.g. (33,434.1 ÷ the net number of expected new residents = 2004 – 120.12 persons = 1,883.9 persons) yields a current, per resident, contribution rate for the traffic and transport works within the Victoria Road Precinct of **$17.75** (Rounded up). This figure which will be subject to future indexing as per the indexing methods of the subject parent contributions plan - Marrickville Contributions Plan 2014 – refer to pages 34-35 of the parent contributions plan).

Non – Residential - Retail and Commercial Contribution Rate Calculations – Traffic and Transport Infrastructure Works.

To determine the individual traffic and transport contribution rates for the retail and commercial developments within the up – zoned areas of the precinct the following methods were used to first determine *the total expected number of new employees for each of the expected new major uses in the upzoned areas of the precinct:*

See Figure 13 on the next page.

Figure 13 – A calculation of the expected number of new employees for the most likely additional uses within the upzoned areas of the precinct:

Major expected non-residential land uses within the precinct	Expected additional *Gross Floor Areas (GFA)* for these uses based upon previous research by IWC; Cardno (T&T) and others. (sqm. = Square Metres) (*See table 4-2 page 26 of Cardno Precinct 47 T& T Needs Study).	Occupancy rate for new uses extracted from existing Marrickville Contributions Plan 2014	Expected number of new employees within the upzoned areas of the precinct, obtained by ÷ the expected total new GFA by the expected occupancy rate from the existing Marrickville Contributions Plan 2014.
Commercial	111,272 sqm. *	1 employee/20 sqm. of GFA	5,563.6 persons
Retail	21,820 sqm. *	1 employee/20 sqm. of GFA	1,091 persons
		Total additional employees (persons)	6,654.6 persons

Utilising these expected employee numbers for the expected new major uses within the Precinct, the per person contributions rates for traffic and transport infrastructure works were determined by multiplying the percentage share of each of the major land uses of the total traffic and transport infrastructure costs of the precinct by the total number of expected net new employees for each of those land uses. See Figure 14 on the next page.

Figure 14 - Calculation of the contribution rate for each new employee for the most likely additional uses within the upzoned areas of the precinct towards additional Traffic and Transport Infrastructure required within Precinct 47.

Major expected non-residential land uses within the precinct	% of total future hourly traffic generation within the precinct (rounded up or rounded down as appropriate) - Extracted from Figure 11 above.	Resultant % share of the total cost traffic and transport infrastructure upgrades required within the precinct – Extracted from Figure 12 above.	Expected No. of additional Employees within the upzoned areas of the Victoria Road Precinct	Minus a credit for likely no. of existing non-residential employees within P47 – Expressed in numbers of existing employees + a credit for recently approved developments within the precinct.	Net Expected No. of additional Employees within the upzoned areas of the Victoria Road Precinct	Single employee contribution rate (per 20sqm of GFA) for additional Traffic and Transport Infrastructure Works within Precinct 47.
Commercial	63%	$187,065	5,563.60	1457.1	4,106.5	$45.60 (rounded up)
Retail	25.74%	$76,429.4	1,091.00	253.55	837.45	$91.30 (rounded up)

This yields a current per employee contribution rate for the traffic and transport works within the Victoria Road Precinct of **$45.60** for commercial developments and **$91.30** for retail developments (which will be subject to future indexing as per the indexing methods of the current Marrickville Contributions Plan 2014 – refer to pages 34-35 of this parent contributions plan).

Note: The Traffic and Transport Infrastructure contribution rate for the other non-residential land uses mentioned within the current Marrickville Contributions Plan 2014 i.e. "Industrial", were obtained in this instance by utilising the base commercial contribution rate and altering it in accordance with the employee occupancy rate within the Marrickville Contributions Plan 2014 for Industrial i.e. one employee per 100sqm of Gross Floor Area (GFA) e.g. **($45.60** (base commercial rate) x 1 employee every 100 sqm. of GFA (Industrial occupancy rate under current Marrickville Contributions Plan 2014 = **$45.60**).

Water Infrastructure Investigations Contribution Calculations:

Principles:

Given that it is not possible to differentiate, in readily quantifiable terms, between the stormwater and flooding hazards for each of the expected major land uses within the precinct, it is considered reasonable that they share equally (on a per resident/employee basis) in the cost of the necessary water infrastructure investigative studies for the precinct.

Refer to Figure 15 below.

Figure 15 - Per person contribution towards Water Infrastructure Investigative Studies within Precinct 47.

Major expected land use within the upzoned areas of the precinct	**Total number of expected employees/residents within the upzoned areas of the precinct**	**Likely credit for existing development expressed as numbers of employees (equally shared between the major expected non-residential uses).**	**Net total number of employees/residents within the upzoned areas of the precinct who are likely able to contribute to the cost of the required water infrastructure investigations.**
Residential	2,004.00	120.12	1,883.9
Commercial	5,563.60	1457.1	4,106.5
Retail	1,091.00	253.55	837.45
Sub - total	8,658.60	1830.77	6827.85 (total contributing population)
Total cost of water infrastructure investigations ÷ Total number of expected residents/employees = cost per person			=$126,885 ÷ 6827.85
			$18.60 per resident/employee (rounded up)

Notes for Figure 15:

1. *Contribution rates for land uses not mentioned above were obtained by applying the relevant employee occupancy rate within the Marrickville Contributions Plan 2014.*

Other Relevant Contributions within this Sub-plan:

Other Traffic and Transport Contributions:

Existing "Traffic Facilities" Contribution rates for "Marrickville LGA other than Planning Precinct areas" will not apply to the "contributing area" of the Victoria Road Precinct given that this area will be addressing the traffic and transport upgrade costs within its own locality.

Community Facilities and Recreation Facilities Contributions:

The property owners within the "contributing area" of the Victoria Road Precinct will meet its relevant obligations for additional demand generated on these public facilities as per the same rates for the relevant "Marrickville LGA other than Planning Precinct areas" contribution rates.

Plan Administration Fees:

The existing standard administration fee (2% of the total cost of the combined relevant development contributions for a development item i.e. a one bedroom apartment) mentioned on page 113 of the current Marrickville Contribution Plan 2014, also applies to the "contributing area" of the Victoria Road Precinct.

3.5 Payment of Contributions

3.5.1 Monetary Contributions:

Refer to parent contributions plan (Section 2.14 – Timing and methods of payments Monetary).

3.5.2 'Works-in-kind' (WIK) / 'Material public benefit' (MPB):

Refer to parent contributions plan (Section 2.14 – Timing and methods of payments Monetary – Provision of a material public benefit – Page 32).

Additionally, in relation to this sub-plan, Council may accept an offer by the applicant to provide an "in-kind" contribution (i.e. the applicant completes part or all of relevant work/s identified in this sub- plan) or through provision of a material public benefit as an alternative in lieu of the applicant satisfying its obligations under this sub-plan. Council will require the applicant to enter into a written agreement for the provision of these alternatives.

Council is under no obligation to accept works-in-kind or material public benefit offers. In consideration of any such offer, Council will assess the public benefits and give due considerations to relevant matters including the following:

a) the extent to which the WIK/MPB satisfies the purpose for which the contribution was sought;

b) the works-in-kind being facilities which are already included in the sub-plan;

c) the extent to which the MPB satisfies a community need or may reduce the demand for levied items;

d) the impending need to construct the works for which the contributions are to be offset;

e) the provision of the WIK/MPB will not prejudice the timing, the manner or the orderly provision of public infrastructure included in the works program or the financial integrity of Council's sub-plan;

f) an assessment of the shortfall or credit in monetary contributions as a result of the proposal;

g) the availability of supplementary funding to make up the shortfall in contributions;

h) locational and other factors that may affect usability;

i) impact of recurrent operational and maintenance costs; and

j) the provision of the WIK/MPB must not result in piecemeal delivery of infrastructure or likely to result in the need to reconstruct the works due to future nearby developments (i.e. normally the works will need to relate to a whole street block or a defined precinct).

Council must be satisfied that the MPB offer, other than a 'work-in-kind', provides a substantial benefit to the community not envisaged by the sub-plan and that this benefit warrants Council accepting responsibility in fulfilling the intent of the sub-plan notwithstanding a reduction in expected cash contributions. A MPB does not include a payment of a monetary contribution or the dedication of land free of cost.

Acceptance of any such alternative is at the sole discretion of the council. Council may review the valuation of works and may seek the services of an independent person to verify their value. In these cases, all costs and expenses borne by the council in determining the value of the works or land will be paid for by the applicant.

3.5.3 Planning Agreements:

An applicant may voluntarily offer to enter into a planning agreement with Council in connection with a development application within the contributing area of the precinct. Under a planning agreement, the applicant may offer to pay money,

dedicate land, carry out works, or provide other material public benefits for public purposes. All Planning Agreements need to conform to the Inner West Council Planning Agreements Policy (currently under development).

3.6 Deferred/ Periodic Payments

Refer to parent contributions plan (Section 2.14 – Timing and methods of payments Monetary).

3.7 Timing of Payments

Refer to parent contributions plan (Section 2.14 – Timing and methods of payments Monetary).

3.8 Refunds

Refer to parent contributions plan (Section 2.18 - Refunds).

3.9 Indexing of Contribution Rates

Indexing for the contributions within this sub-plan shall be in accordance with the indexing requirements of the parent contributions plan with the exception that monies will be collected first for the *critical infrastructure priority items* detailed within this sub-plan where the total required payments are subject to the State Government *Cap*. Also, the indexing of the *traffic and transport works* included within this plan shall be indexed concurrently within the indexing for the parent contributions plan (using the relevant with Consumer Price Indices – as per the parent contributions plan).

Section 4 – Infrastructure Strategy Plans:

4.1 Required Traffic and Transport Improvements within the Precinct

Removal of crossing and installation of traffic signals

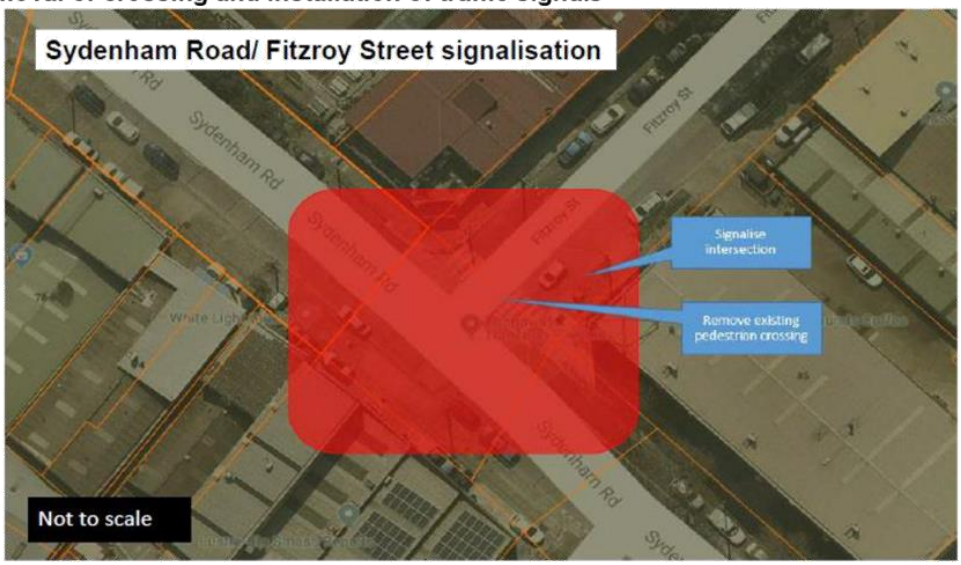


Figure 16 - Infrastructure Item No. VRP – R - 001

Figure 17 – Excerpt from Marrickville bike plan – Location of proposed Bicycle Infrastructure Works with Precinct 47

Legend

- Regional Route (On-road)
- Local Routes (On-road)
- Bicycle Route works located outside of Precinct 47 - Victoria Road Precinct
- Precinct 47 - Victoria Road Precinct boundary
- On-road bicycle stencil markings that are to be provided at all intersections and each 50 metres of these local on-road bicycle routes within the precinct.

SUMMARY

This report concerns the amended plans and additional information submitted to Council on 20 September 2019 for an application to partially demolish existing on-site buildings, and construct a 4 storey boarding house development for student accommodation. The development is to result in a total of 180 rooms. The amended plans and additional information were submitted in response to the resolution of the Sydney Eastern City Planning Panel (SECPP) at its meeting on 5 September 2019.

The application is referred to the SECPP for determination.

1. Background

A report on an application to partial demolish existing building and construction of a 180 room student accommodation building (Boarding House) over 4 levels, with associated management offices, common rooms and landscaping was considered by the SECPP at its meeting on 5 September 2019

The Panel resolved unanimously to defer the determination of the application to allow the provision of the following:

1. *Preparation of amended drawings including a flood wall to PMF with appropriate setback from site boundary to enable landscaping*

2. *Indicative landscape plan showing how landscaping could be provided towards the north of the site in front of the wall*

3. *Amended Stormwater and Flooding Report and Flood Response Management Plan showing the protection from the PMF, including measures that could be implemented should the flood gate fail*

4. *Additional measures on top of the flood gate to outline how protections would occur should flood gate fail and other examples of flood gates and their operation in Sydney*

5. *Additional information in an amended Green Travel Plan including confirmation students are not permitted residential permits*

6. *Preparation of a response to the Councillor motion correspondence date 27 August 2019;*

7. *Confirmation that the building will include a full sprinkler system*

2. Amended Plans

On 20 September 2019 the applicant submitted amended plans and additional information that responded to the above resolution of the SECPP.

The amended plans are reproduced below:

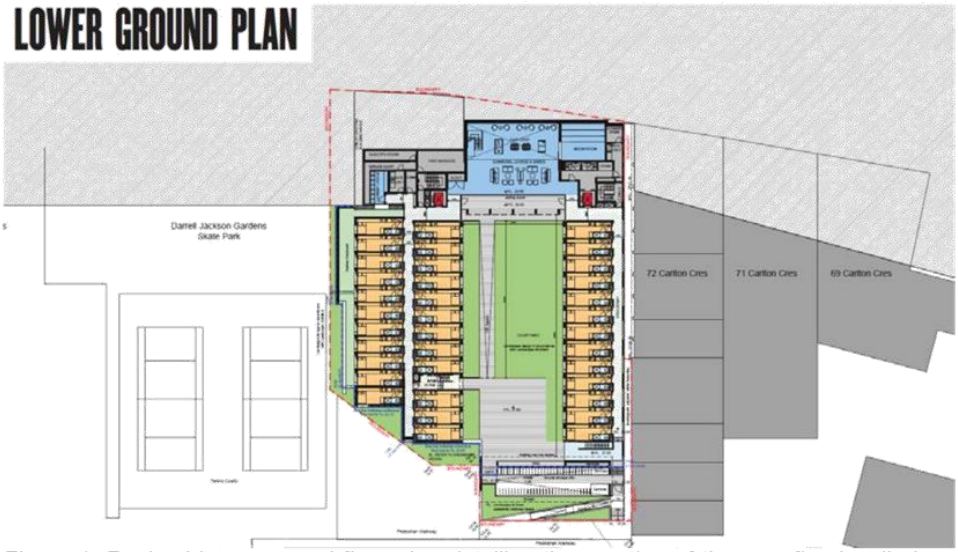


Figure 1: Revised lower ground floor plan detailing the creation of the new flood wall along the western boundary

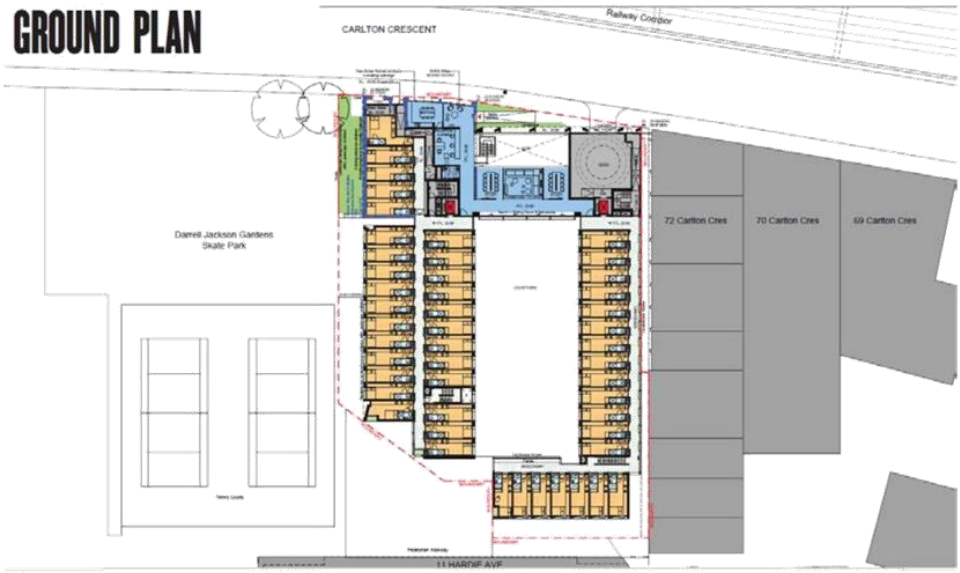


Figure 2: Revised ground floor plan detailing the creation of the new flood wall

Figure 3: Revised landscape plan showing landscaping to western boundary

Figure 4: Revised east west section plan showing the flood wall to the western boundary

Figure 5: Revised model of completed development showing flood wall when viewed from the Darren Jackson Gardens Skate Park.

Figure 6: Revised model of completed development showing flood wall when viewed from Carlton Crescent.

Figure 7: Revised model of completed development showing flood wall when viewed from Darrel Jackson Gardens.

3. Planning Assessment

Below is an assessment of the amended plans and additional information submitted by the applicant in response to the resolution of the SECPP:

1. *Preparation of amended drawings including a flood wall to PMF with appropriate setback from site boundary to enable landscaping*

Comment:

The applicant has submitted amended plans which detail the provision of a flood wall designed to protect occupants for all flooding events including a potential PMF flooding event. This wall has been designed to accommodate a 1m setback from the site boundary for on-site tree plantings and a 1.5m setback from the openings of proposed boarding rooms, to ensure future occupants retain outlook and capacity for cross ventilation. Council has reviewed the proposed setbacks of the flood wall and landscape treatments to soften the visual impact of the flood wall and raises no objection. The amended flood wall design is recommended for approval, subject to the inclusion of revised Deferred Commencement conditions discussed below under point 3.

Council has recommended an additional deferred commencement condition requiring the submission of an amended western elevation plan, detailing the proposed flood wall. This ensures an accurate and updated set of plans to form part of the operational consent.

2. *Indicative landscape plan showing how landscaping could be provided towards the north of the site in front of the wall*

Comment:

An amended landscape plan and indicative modelling have been submitted as part of the additional information package. This information satisfactorily demonstrates that the proposed flood wall will be treated and hidden from the public domain so that the structure is not visually dominant. However the submitted information does not include a species list of plantings that are to be planted along the flood wall. Council has recommended a new Deferred Commencement condition requiring the submission of a planting schedule to the satisfaction of Council's Tree Management Officers to be provided prior to any operational consent being issued.

3. *Amended Stormwater and Flooding Report and Flood Response Management Plan showing the protection from the PMF, including measures that could be implemented should the flood gate fail*

Comment:

The applicant has provided the requested amended stormwater, flooding report and flood response management plan. This plan has been reviewed and assessed by Council Development Engineers who provided the following comments:

Flooding

From attached Figure 1 (Noted as Figure 3 in the amended Stormwater Report by TTW) the PMF level at Western entrance at the rear is RL 22m AHD reducing to RL 21.5m AHD at the Eastern entrance at the rear. Plan A03.100 indicates that a ramp may be introduced at the rear which could attain a height of RL 21.5m AHD (ie the PMF level at the eastern entrance). It is therefore recommended that the design be flipped to provide a ramped access to the eastern entrance (at the rear) to a height of RL 21.5m AHD which would protect the site from the PMF flood at this location. The western entrance (at the rear) must be protected to a height of RL 22m AHD by the use of steps to provide the height required to protect this entrance to the PMF level at this location.

Stormwater

The amended stormwater report by TTW dated 19/9/19 is unsatisfactory for the following reasons;

- *It is unclear what the height of the flood wall will be at the rear and where the transition from a height of RL22.0m AHD to RL 21.5m AHD occurs. The actual height of the flood gate is also unclear.*
- *The Section numbers in the contents page do not match the actual contents of the report. The Section in the original report on the Stormwater Disposal Design has been deleted which is unacceptable. Other sections also missing from the amended stormwater report are the OSD design and the water quality design sections.*
- *The report refers to a Stormwater Plan C0110 Revision P4 which is not acceptable as it proposes a pump out system which is not acceptable. The report should refer the original Stormwater plans C0110 Revision P1 which details a gravity system with a 375 diameter pipe connection to the Stormwater system in Hardie Avenue.*

Council's Development Engineer has outlined that the above concerns can be addressed through the imposition of amended Deferred Commencement conditions. These amended conditions are outlined below:

- ***Deferred Commencement Condition 1 – is to be amended to read:*** *An easement for drainage over downstream properties (Lot 3 DP 717782 and Lot 1 DP 1102625) must be created to provide gravity stormwater drainage to be the property as detailed in Plan C0110 Revision P1. Satisfactory written documentation of the creation of an easement or of a legal agreement to create an easement shall be submitted to Council.*

- ***Deferred Commencement Condition 3 – to be added as follows:*** *The plans shall be amended to provide a ramped access to the eastern entrance (at the rear) to a height of RL 21.5m AHD so as to protect the site from the PMF flood at this location. The western entrance (at the rear) must be protected to a height of RL 22m AHD by the use of steps to protect this entrance to the PMF level at this location.*

Should these conditions be imposed then Council raises no objection to the amended proposal.

4. *Additional measures on top of the flood gate to outline how protections would occur should flood gate fail and other examples of flood gates and their operation in Sydney*

Comment:

Council's Development Engineer has reviewed the proposed flood gate and advises that reliance upon such a scheme is unacceptable. It is considered that the use of the flood gate will rely on management procedures and a maintenance regime which will need to be in place and monitored over a long period of time and which are prone to failure under stress. Council's preference is for a passive form of flood protection that does not rely on management and maintenance that become more likely to fail with the passage of time.

Council has devised an alternative design which will remove the requirement for a flood gate and ensures compliance with all flood requirements without reliance upon mechanical means. The amendment is recommended to be imposed as a Deferred Commencement condition, outlined above and replicated below:

- *The plans shall be amended to provide a ramped access to the eastern entrance (at the rear) to a height of RL 21.5m AHD so as to protect the site from the PMF flood at this location. The western entrance (at the rear) must be protected to a height of RL 22m AHD by the use of steps to protect this entrance to the PMF level at this location.*

5. *Additional information in an amended Green Travel Plan including confirmation students are not permitted residential permits*

Comment:

Page 18 of the updated Green Travel Plan confirms that students of the development will not be entitled to obtain residential parking permits from Council and states that signage outlining such will be displayed on on-site and in an email notice sent to all students as part of a welcome package. This is supplemented by condition A(12) – Parking Permits of the originally recommended consent, which expressly prohibits residents of the development from obtaining a permit in the local resident parking scheme.

6. *Preparation of a response to the Councillor motion correspondence date 27 August 2019;*

Comment:

The applicant has provided a response to the Sydney City East Planning Panel deferral for 74 – 75 Carlton Crescent Summer Hill. Within this letter the applicant has provided a comprehensive response to each of the concerns raised at the Council meeting on 3 September 2019. Council Assessment Officers raise no objection to this response and consider it to satisfy the deferral requirements.

7. *Confirmation that the building will include a full sprinkler system*

Comment:

A letter signed by Jason Krzus – Senior Associate of Steve Watson & Partners – Building Code Consultants & Building Surveyors & Certifiers has been provided. This letter outlines that the development is required to provide a sprinkler system and that such a system is proposed as part of the design. This is considered to be sufficient documentation to satisfy the requirements of the deferral.

4. Changes to recommended conditions of consent

The additional information provided as part of the amended documentation package has resulted in amendments to the recommended conditions of consent. It is recommended that the following conditions be amended as follows:

Deferred Commencement Condition 1 – is to be amended to read:

An easement for drainage over downstream properties (Lot 3 DP 717782 and Lot 1 DP 1102625) must be created to provide gravity stormwater drainage to be the property as detailed in Plan C0110 Revision P1. Satisfactory written documentation of the creation of an easement or of a legal agreement to create an easement shall be submitted to Council.

Deferred Commencement Condition 3 – to be added as follows:

The plans shall be amended to provide a ramped access to the eastern entrance (at the rear) to a height of RL 21.5m AHD so as to protect the site from the PMF flood at this location. The western entrance (at the rear) must be protected to a height of RL 22m AHD by the use of steps to protect this entrance to the PMF level at this location.

Deferred Commencement Condition 4 – to be added as follows:

The applicant is to provide an amended landscape plan outlining a comprehensive planting schedule. This amended plan must detail the species of trees and vegetation to be planted along the western boundary to screen the proposed flood wall. The landscape plan is to be to the satisfaction of Council's Tree Management Officers.

Deferred Commencement Condition 5 – to be added as follows:

The applicant is to provide an amended western elevation plan. This plan must detail the proposed flood wall drawn to the RL detailed upon the approved floor plans.

Condition A(1) - Approved plans stamped by Council - is to be amended as follows:

The development must be carried out only in accordance with the plans, documents and specifications set out in the table below and stamped as approved by Council, and any other supporting documentation received with the application, except as amended by the conditions specified hereunder.

Drawing Number	Revision	Dated	Title	Prepared By
Architectural Plans				
A01.010	C	24/6/2019	Demolition Plan	Bates Smart
A01.000	C	24/6/2019	Site Plan	Bates Smart
A03.100	***E***	***18/9/2019***	***Lower Ground Plan_PMF Update***	***Bates Smart***
A03.000	***C***	***18/9/2019***	***Ground Plan_PMF Update***	***Bates Smart***
A03.001	C	24/6/2019	L01 Plan	Bates Smart
A03.002	C	24/6/2019	L02 Plan	Bates Smart
A03.003	C	24/6/2019	Roof Plan	Bates Smart
A07.000	C	24/6/2019	North Elevation	Bates Smart
A07.001	C	24/6/2019	West Elevation	Bates Smart
A07.002	E	7/8/2019	South Elevation	Bates Smart
A07.003	E	7/8/2019	East Elevation	Bates Smart
A08.000	C	24/6/2019	NS Long Section 01	Bates Smart
A08.001	E	7/8/2019	NS Long Section 02	Bates Smart
A08.002	***C***	***18/9/2019***	***EW Cross Section 01***	***Bates Smart***
A08.003	C	24/6/2019	EW Cross Section 02	Bates Smart
A08.004	E	7/8/2019	NS Long Section 03	Bates Smart
A11.000	C	24/6/2019	External Finishes	Bates Smart
Landscape Plans				
L-DA-04	B	6/12/2018	Landscape Plan – Lower Ground Floor	360 Degrees Landscape Architects
L-DA-06	B	6/12/2018	Landscape Plan – Ground Floor	360 Degrees Landscape Architects
L-DA-07	B	6/12/2018	Landscape Plan – Level 01 Plan	360 Degrees Landscape Architects
L-DA-08	B	6/12/2018	Landscape Plan – Level 02 Plan	360 Degrees Landscape Architects
L-DA-09	B	6/12/2018	Façade & Vertical Planter Plant Information	360 Degrees Landscape Architects
L-DA-010	B	6/12/2018	Façade & Vertical Planter Plant Information	360 Degrees Landscape Architects

L-DA-011	B	6/12/2018	Façade & Vertical Planter Details	360 Degrees Landscape Architects
L-DA-012	B	6/12/2018	Planting Palette (sheet 1)	360 Degrees Landscape Architects
L-DA-013	B	6/12/2018	Planting Palette (sheet 2)	360 Degrees Landscape Architects
Stormwater plans				
C0000	***Rev A***	***30/11/2018***	***Stormwater Drainage Plans***	***TTW – Taylor Thomson Whitting***
C0010	***Rev P1***	***30/11/2018***	***Stormwater Drainage Plans***	***TTW – Taylor Thomson Whitting***
C0110	***Rev P1***	***30/11/2018***	***Stormwater Drainage Plans***	***TTW – Taylor Thomson Whitting***

The development must be carried out in accordance with the recommendations set out in the following supplementary documents, which form part of the approved application.

Supplementary Documents	**Date**	**Prepared By**
BCA Compliance Statement for DA Submission	November 2018	Steve Watson & Partners
Phase 1 and Phase 2 Environmental Site Assessment	30 November 2018	JBS&G
Site Flood Assessment	7 December 2018	TTW – Taylor Thomson Whitting
Flood Impact Assessment	10 July 2019	WMA Water
Flood Response Management Plan	14 August 2019	TTW – Taylor Thomson Whitting
Geotechnical Investigation	30 November 2018	JK Geotechnics
Noise Impact Assessment	4 December 2018	Acoustic Logic
Construction Methodology Assessment – REV D	27 June 2019	TTW – Taylor Thomson Whitting
Access Report	4 December 2018	A Architecture & Access
Environmentally Sustainable Design (ESD) Assessment Report	5 December 2018	Integrated Group Services
Fire Engineering Capability Statement	7 December 2018	Olsson Fire & Risk Consulting Engineers
NCC Section J – JV3 Assessment Report (Energy Efficiency)	30 November 2018	Integrated Group Services
Operational Management Plan	-	Iglu Pty Limited
Remedial Action Plan	14 January 2019	JBS&G Australia Pty Ltd

- In the event of any inconsistency between the approved plans/supplementary documents and the conditions, the conditions will prevail.

Note: Carrying out of works contrary to the above plans and/ or conditions may invalidate this consent; result in orders, on the spot fines or legal proceedings.

5. Conclusion

Regarding resolution 1. Concerning Preparation of amended drawings including a flood wall to PMF with appropriate setback from site boundary to enable landscaping. Council is of the opinion that this resolution has been satisfied.

Regarding resolution 2. Concerning an Indicative landscape plan showing how landscaping could be provided towards the north of the site in front of the wall. Council is of the opinion that this resolution can be satisfied via an additional Deferred Commencement condition, which requires the applicant to detail proposed vegetation species.

Regarding resolution 3. Concerning an amended Stormwater and Flooding Report and Flood Response Management Plan showing the protection from the PMF, including measures that could be implemented should the flood gate fail. Council is of the opinion that this resolution can be satisfied via an additional Deferred Commencement condition, which has been detailed above.

Regarding resolution 4. Concerning additional measures on top of the flood gate to outline how protections would occur should flood gate fail and other examples of flood gates and their operation in Sydney. Council is of the opinion that this resolution can be satisfied via an additional Deferred Commencement condition.

Regarding resolution 5. Concerning additional information in an amended Green Travel Plan including confirmation students are not permitted residential permits. Council is of the opinion that this resolution has been satisfied.

Regarding resolution 6. Preparation of a response to the Councillor motion correspondence date 27 August 2019. Council is of the opinion that this resolution has been satisfied.

Regarding resolution 7. Confirmation that the building will include a full sprinkler system. Council is of the opinion that this resolution has been satisfied.

6. Recommendation

It is recommended that the application be approved, as previous concerns regarding flooding and patron safety have now been resolved. It is considered that the amended design (subject to minor amendments required by Deferred Commencement conditions) largely ensures that future occupants of the development will be protected in any flooding event. The proposal is therefore considered to satisfy the requirements of clause 6.2 – Flood Planning and has demonstrated that it is suitable for the site. Council raises no objection to the development's approval, subject to imposition of the conditions set out below.

7. Conditions of Consent

The following conditions have been prepared should be SECPP be of the mind to approve the application.

CONDITIONS OF CONSENT

Description of Work as it is to appear on the determination:

Partial demolition of existing building and construction of a 180 room student accommodation building (boarding house), associated management offices, common rooms over 4 levels and landscaping.

PART A - DEFERRED COMMENCEMENT CONSENT

This consent shall not operate until such time as the following additional/revised information is provided to the satisfaction of Council:

1. *An easement for drainage over downstream properties (Lot 3 DP 717782 and Lot 1 DP 1102625) must be created to provide gravity stormwater drainage to be the property as detailed in Plan C0110 Revision P1. Satisfactory written documentation of the creation of an easement or of a legal agreement to create an easement shall be submitted to Council.*

2. *The Applicant shall prepare and provide to Sydney Trains for approval/certification the following final version items in compliance with relevant ASA Standards (https://www.transport.nsw.gov.au/industry/standards-and-accreditation/standards):*

    a. *Geotechnical and Structural report/drawings that meet Sydney Trains requirements. The Geotechnical Report must be based on actual borehole testing conducted on the site closest to the rail corridor.*

    b. *Construction methodology with construction details pertaining to structural support during excavation. The Applicant is to be aware that Sydney Trains will not permit any rock anchors/bolts (whether temporary or permanent) within its land or easements.*

    c. *Cross sectional drawings showing the rail corridor, sub soil profile, proposed basement excavation and structural design of sub ground support adjacent to the rail corridor. All measurements are to be verified by a Registered Surveyor.*

    d. *Detailed Survey Plan showing the relationship of the proposed developed with respect to Sydney Trains easement and rail corridor land.*

    e. *If required by Sydney Trains, an FE analysis which assesses the different stages of loading-unloading of the site and its effect on the rock mass surrounding the rail corridor.*

    f. *If required by Sydney Trains, a Monitoring Plan.*

3. *The plans shall be amended to provide a ramped access to the eastern entrance (at the rear) to a height of RL 21.5m AHD so as to protect the site from the PMF flood at this location. The western entrance (at the rear) must be protected to a height of RL 22m AHD by the use of steps to protect this entrance to the PMF level at this location.*

4. *The applicant is to provide an amended landscape plan outlining a comprehensive planting schedule and proposed irrigation management. This amended plan must detail the species of trees and vegetation to be planted along the western boundary*

to screen the proposed flood wall. The landscape plan is to be to the satisfaction of Council's Tree Management Officers.

5. *The applicant is to provide an amended western elevation plan. This plan must detail the proposed flood wall drawn to the RL detailed upon the approved floor plans.*

This information is required to be provided and approved by Council within 24 months of the date of the approval. Failure to satisfy the above requirements by the specified date will result in lapse of consent.

The correspondence issued by Council, once the above conditions are satisfied, and any associated documents submitted to satisfy the deferred commencement condition are to form part of this consent. The submission of this additional information may result in new conditions being added to the consent.

Any conditions issued as part of Sydney Trains approval/certification of the above documents will also form part of the consent conditions that the Applicant is required to comply with.

Providing the above matters are satisfied by Council by the specified date, general conditions of consent are:

PART B – Operational Conditions

A ***General Conditions***

(1) Approved plans stamped by Council

The development must be carried out only in accordance with the plans, documents and specifications set out in the table below and stamped as approved by Council, and any other supporting documentation received with the application, except as amended by the conditions specified hereunder.

Drawing Number	Revision	Dated	Title	Prepared By
Architectural Plans				
A01.010	C	24/6/2019	Demolition Plan	Bates Smart
A01.000	C	24/6/2019	Site Plan	Bates Smart
A03.100	E	18/9/2019	Lower Ground Plan_PMF Update	Bates Smart
A03.000	C	18/9/2019	Ground Plan_PMF Update	Bates Smart
A03.001	C	24/6/2019	L01 Plan	Bates Smart
A03.002	C	24/6/2019	L02 Plan	Bates Smart
A03.003	C	24/6/2019	Roof Plan	Bates Smart
A07.000	C	24/6/2019	North Elevation	Bates Smart
A07.001	C	24/6/2019	West Elevation	Bates Smart
A07.002	E	7/8/2019	South Elevation	Bates Smart
A07.003	E	7/8/2019	East Elevation	Bates Smart

A08.000	C	24/6/2019	NS Long Section 01	Bates Smart
A08.001	E	7/8/2019	NS Long Section 02	Bates Smart
A08.002	C	18/9/2019	EW Cross Section 01	Bates Smart
A08.003	C	24/6/2019	EW Cross Section 02	Bates Smart
A08.004	E	7/8/2019	NS Long Section 03	Bates Smart
A11.000	C	24/6/2019	External Finishes	Bates Smart
Landscape Plans				
L-DA-04	B	6/12/2018	Landscape Plan – Lower Ground Floor	360 Degrees Landscape Architects
L-DA-06	B	6/12/2018	Landscape Plan – Ground Floor	360 Degrees Landscape Architects
L-DA-07	B	6/12/2018	Landscape Plan – Level 01 Plan	360 Degrees Landscape Architects
L-DA-08	B	6/12/2018	Landscape Plan – Level 02 Plan	360 Degrees Landscape Architects
L-DA-09	B	6/12/2018	Façade & Vertical Planter Plant Information	360 Degrees Landscape Architects
L-DA-010	B	6/12/2018	Façade & Vertical Planter Plant Information	360 Degrees Landscape Architects
L-DA-011	B	6/12/2018	Façade & Vertical Planter Details	360 Degrees Landscape Architects
L-DA-012	B	6/12/2018	Planting Palette (sheet 1)	360 Degrees Landscape Architects
L-DA-013	B	6/12/2018	Planting Palette (sheet 2)	360 Degrees Landscape Architects
Stormwater plans				
C0000	Rev A	30/11/2018	Stormwater Drainage Plans	TTW – Taylor Thomson Whitting
C0010	Rev P1	30/11/2018	Stormwater Drainage Plans	TTW – Taylor Thomson Whitting
C0110	Rev P1	30/11/2018	Stormwater Drainage Plans	TTW – Taylor Thomson Whitting

The development must be carried out in accordance with the recommendations set out in the following supplementary documents, which form part of the approved application.

Supplementary Documents	Date	Prepared By
BCA Compliance Statement for DA Submission	November 2018	Steve Watson & Partners
Phase 1 and Phase 2 Environmental Site Assessment	30 November 2018	JBS&G
Site Flood Assessment	7 December 2018	TTW – Taylor Thomson Whitting
Flood Impact Assessment	10 July 2019	WMA Water
Flood Response Management Plan	14 August 2019	TTW – Taylor Thomson Whitting
Geotechnical Investigation	30 November 2018	JK Geotechnics
Noise Impact Assessment	4 December 2018	Acoustic Logic
Construction Methodology Assessment –	27 June 2019	TTW – Taylor Thomson Whitting

REV D		
Access Report	4 December 2018	A Architecture & Access
Environmentally Sustainable Design (ESD) Assessment Report	5 December 2018	Integrated Group Services
Fire Engineering Capability Statement	7 December 2018	Olsson Fire & Risk Consulting Engineers
NCC Section J – JV3 Assessment Report (Energy Efficiency)	30 November 2018	Integrated Group Services
Operational Management Plan	-	Iglu Pty Limited
Remedial Action Plan	14 January 2019	JBS&G Australia Pty Ltd

- In the event of any inconsistency between the approved plans/supplementary documents and the conditions, the conditions will prevail.

Note: Carrying out of works contrary to the above plans and/ or conditions may invalidate this consent; result in orders, on the spot fines or legal proceedings.

(2) Updating of Plans/ Documents

The approved, landscape plans, stormwater plans and supplementary documents must all be updated to reflect the approved architectural plans.

(3) RMS Conditions

A Road Occupancy Licence must be obtained from Transport Management Centre for any works that may impact traffic flows on Carlton Crescent during construction activities.

A ROL can be obtained through https://myrta.com/oplinc2/pages/security/oplincLogin.jsf

(4) Payment of any Additional Fees

If the estimated cost of works for the construction certificate application exceeds the estimate supplied with the development application, an additional fee, any contributions and bonds based on the revised estimate must be paid to Council prior to release of the Construction Certificate.

(5) Student Accommodation Requirements

The use of the premises as student accommodation must comply at all times with the following:

a) The use must comply at all times with the Plan of Management submitted to Council, prepared by Iglu Pty Limited, and as amended by the conditions specified hereunder;

b) A copy of the Plan of Management and House Rules must be annexed to each and every tenancy/occupation agreement for a room;

c) A copy of the approved Plan of Management and House Rules must be clearly displayed within every common room in the building at all times;

d) The Plan of Management must not be amended without prior consent of Council;

e) All tenancy/occupation agreements for rooms within the premises must be for a minimum period of three (3) months;

f) Not more than 2 lodgers must occupy each of the rooms.

g) All common rooms/areas and recreation rooms/areas must be maintained at all times for the use of the lodgers; and

h) Each self-contained room and shared kitchen must be fitted out with washing up facilities, a cooktop, microwave, fridge and storage space with such utilities being maintained in working order at all times.

(6) Restriction to Users

The following restriction applies to the building hereby approved for student accommodation:

a) The accommodation portion of the building may only be used for residential accommodation for *students* as hereinafter defined and not otherwise as residential accommodation, or as serviced apartments, private hotel, boarding house, tourist or backpackers accommodation or the like.

b) For the purpose of this condition "student" means a person over 16 years of age enrolled with a tertiary institution in Australia and enrolled in an accredited course of tertiary education in Australia whether part time or full time, but excludes any non-award programs.

c) Upon ceasing to be enrolled to attend a tertiary educational course with a tertiary institution in Australia, the now former student shall vacate the residential accommodation within 6 months of the expiration of the tertiary course.

Prior to the issue of an occupation certificate, a restrictive covenant is to be registered on the title of the premises in the above terms in favour of Council to the satisfaction of Council at the full expense of the developer.

It is the responsibility of the operator of the premises to verify any occupants of the approved development with respect to the restriction to users required by this condition of consent. This must be include verifying confirmation of enrolment prior to occupation by any persons into the development and an updated register of such information at all times. The register must be available for inspection by Council upon request.

(7) Hot Water Systems

Where boarding rooms are provided with separate individual hot water systems, these must be located within the internal area of the boarding room only.

(8) Adaptable Housing

A minimum of 2 adaptable boarding rooms must be provided in accordance with the Universal Accessible Design requirements and Section 2, Chapter A, Part 7 of Comprehensive Inner West Development Control Plan 2016.

(9) Annual Fire Safety Statement

Attention is directed to Clause 177 of the Environmental Planning and Assessment Regulation 2000 regarding the submission of an Annual Fire Safety Statement in relation to each essential fire safety measure implemented in the building or on the land on which the building is situated.

(10) Bicycle Parking

A total of 60 off-street bicycle spaces are to be provided, paved and maintained at all times. All spaces must be provided in accordance with the design requirements set out in Section 2, Chapter A, Part 8 of the Comprehensive Inner West Development Control Plan 2016 and must be used exclusively for parking and not for storage or any other purpose.

(11) Air Conditioning

No air conditioning units are to be installed in any position visible from the public domain without the prior approval of Council.

(12) Parking Permits

Owners and occupants of the proposed building shall not be eligible to obtain parking permits under any existing or future resident parking scheme for the area. The person acting on this consent shall advise any prospective tenant of this condition.

(13) Electrical Substation

Should the proposed development require the provision of an electrical substation, such associated infrastructure shall be incorporated wholly within the development site. Before proceeding with your development further, you are directed to contact Ausgrid directly with regard to the possible provision of such an installation on the property.

(14) Remediation of Land

Remediation and validation of contaminated land must be carried out in accordance with State Environmental Planning Policy No 55 – Remediation of land, the Contaminated Land Management Act 1997, Development Control Plan 2013 and the following documentation:

Document Title	Prepared By	Dated
Iglu No.210 Pty Ltd Remedial Action Plan Former Summer Hill Ambulance Station 74-75 Carlton Crescent Summer Hill, NSW 2130	JBS&G Australia Pty Ltd	14 January 2019

(15) Fire Engineered Solution – Significant Internal Fabric

A fire engineered solution is to be developed to where possible retain the significant surviving internal fabric of the first floor of the former Ambulance Station including skirtings, high waisted panelled doors, glazed doors, architraves, fanlights and door hardware, window sills and surrounds, picture rails and any original cornices and decorative fibrous plaster ceilings.

(16) Retention of the Fireplace – First Floor Study Room Drawing A03.001- L01 Plan

The surviving fireplace, chimney breast, hearth and decorative plasterwork is to be retained. Any installation of a modern heater to the fireplace is to be undertaken in such a manner that the hearth and decorative plasterwork remain evident.

(17) Reinstatement of Ambulance Station Doors Drawing A07.000 North Elevation

Additional research is to be undertaken to confirm and resolve the detail of the Ambulance Station doors. Typically the lower section of the door was boarded. In this case the upper section of each door appears to have been a single pane of glass and not four panes. The timber frame is to have the same width as is evident in the historic photographs (and not the thin frames as current shown on the elevations). The doors may have been grained however this should be confirmed by historic photographs. Revised drawings are to be submitted to Council (along with the colour scheme) that also show the impact of the raising of levels due to localised flooding issues.

(18) Reinstatement of External Shutters Drawing A07.000 North Elevation

The external shutters to the main façade are to be re-instated based on historic photographs.

(19) Acoustic Treatment – External Windows

The Acoustic Treatment of external windows to the facades is to be developed in conjunction with the Heritage Architect to ensure that the original window sashes are retained and that the windows sashes and shutters will continue to be operable.

(20) Retention of Nibs Drawing A03.001- L01 Plan

Nibs are to be retained where existing original walls are to be removed (as shown on the L01 floor plan) and the bulkheads in the hallway are to be retained. Nibs and bulkheads are to be shown on the Construction Certificate drawings as being retained..

(21) Salvaged Building Material

Masonry, joinery, roof tiles and decorative architectural elements approved to be demolished, which may include windows and doors and timber flooring, must be catalogued, labelled, salvaged and where practical reused on the project or transferred to an established second building material dealer for recycling. Documentation of the salvage methodology must be submitted to the satisfaction of the Principal Certifying Authority prior to the commencement of demolition.

(22) Signage on Facades

The existing logo and signage from the Ambulance station phase of occupation of the building is to be painted out in the similar colour as the body of the wall or the colour of the parapet. New signage is to be fixed into the joints of existing brickwork or is to be separated from the masonry by non-ferrous spacers.

(23) Interpretive Panels (two)

Two interpretive panels are to be installed within the shared rooms (study, meeting room or lounge) within the former Ambulance Station that detail the original design and use of the building and include high quality reproductions of historic photographs and newspaper articles. The art work for the panels should be submitted to Council for approval.

(24) Stormwater Drainage

All stormwater drainage being designed in accordance with the provisions of the Australian Rainfall and Runoff (A.R.R.), Australian Standard AS3500.3-2015 'Stormwater Drainage' and Council's Stormwater Policy. Pipe and channel drainage systems shall be designed to cater for the fifty (50) year A.R.I. storm. In all cases the major event surface flow paths shall be designed to cater for the one hundred (100) year A.R.I. storm.

The site stormwater drainage shall be constructed generally in accordance with Stormwater Drainage Plans 181975 C0000, C0010 and C0110 by TTW Pty Ltd, dated 30/11/18.

(25) Sydney Trains Condition 1

Unless amendments are required in order to obtain approval/certification/ compliance from Sydney Trains in relation to any of the Sydney Trains related conditions of consent, all excavation and construction works are to be undertaken in accordance with the details, methodology, advice, undertakings and recommendations as detailed in the following documents:

- Overhead Power Mains Assessment Summer Hill 74 Carlton Cres, Revision Final 2.0 prepared by AA Power Engineering dated 18 July 2019.

- Appendix A Blow-Out Model (Level 2 Plan 11kv Sydney Trains Blow-Out Report), prepared by AA Power Engineering dated 18 July 2019.

- Appendix B Blow-Out Model (Elevation Plan 11kv Sydney Trains Blow-Out Report), prepared by AA Power Engineering dated 18 July 2019.

- Appendix C Sag Tension Temperature Calculation Results, Project Name 76M, prepared BY AA Power Engineering dated 18 July 2019.

- Appendix D Sag Tension Temperature Calculation Results, Project Name 106, prepared BY AA Power Engineering dated 18 July 2019.

The Principal Certifying Authority is not to issue the Construction Certificate until written confirmation has been received from Sydney Trains confirming which of the documentation listed in this condition are to now apply or are superseded as a result of the compliance with the Sydney Trains related conditions of consent. The measures detailed in the documents approved/ certified by Sydney Trains under this Condition are to be incorporated into the construction drawings and specifications prior to the issuing of the Construction Certificate. Prior to the commencement of works the Principal Certifying Authority is to provide verification to Sydney Trains that this condition has been complied with.

(26) Sydney Trains Condition 2

If required by Sydney Trains, prior to the commencement of works or at any time during the excavation and construction period deemed necessary by Sydney Trains, a joint inspection of the rail infrastructure and property in the vicinity of the project is to be carried out by representatives from Sydney Trains and the Applicant. These dilapidation surveys will establish the extent of any existing damage and enable any deterioration during construction to be observed. The submission of a detailed dilapidation report will be required within 10 days following the undertaking of the inspection, unless otherwise notified by Sydney Trains.

(27) Sydney Trains Condition 3

If required by Sydney Trains, prior to the issue of the Occupation Certificate, or at any time during the excavation and construction period deemed necessary by Sydney Trains, a joint inspection of the rail infrastructure and property in the vicinity of the project is to be carried out by representatives from Sydney Trains and the Applicant. These dilapidation surveys will establish the extent of any existing damage and enable any deterioration during construction to be observed. The Principal Certifying Authority is not to issue the final Occupation Certificate until written confirmation has been received from Sydney Trains confirming that this condition has been satisfied.

(28) Sydney Trains Condition 4

The Applicant shall prepare an acoustic assessment demonstrating how the proposed development will comply with the Department of Planning's document titled "Development Near Rail Corridors and Busy Roads- Interim Guidelines". The Applicant must incorporate in the development all the measures recommended in the report. A copy of the report is to be provided to the Principal Certifying Authority and Council prior to the issuing of a Construction Certificate. The Principal Certifying Authority must ensure that the recommendations of the acoustic assessment are incorporated in the construction drawings and documentation prior to the issuing of the relevant Construction Certificate.

(28) Sydney Trains Condition 5

Prior to the issue of an Occupation Certificate (whether an interim or final Occupation Certificate), a report must be prepared and submitted to the Certifying Authority, Council and Sydney Trains certifying that the completed development meets the requirements of State Environmental Planning

Policy (Infrastructure) 2007 and with the Department of Planning and Infrastructure's Development Assessment Guideline titled "Development Near Rail Corridors and Busy Roads - Interim Guidelines" as set down in the subject condition of this consent. Such a report must include external and internal noise levels to ensure that the external noise levels during the test are representative of the typical maximum levels that may occur at this development, and that internal noise levels meet the required dB(A) levels. Where it is found that internal noise levels are greater than the required dB(A) level, necessary corrective measures must be carried out to ensure that internal noise levels are compliant with the requirements of this consent.

(29) Sydney Trains Condition 6

Prior to the issue of a Construction Certificate the Applicant is to engage an Electrolysis Expert to prepare a report on the Electrolysis Risk to the development from stray currents. The Applicant must incorporate in the development all the measures recommended in the report to control that risk. A copy of the report is to be provided to the Principal Certifying Authority with the application for a Construction Certificate. The Principal Certifying Authority must ensure that the recommendations of the electrolysis report are incorporated in the construction drawings and documentation prior to the issuing of the relevant Construction Certificate.

(30) Sydney Trains Condition 7

Sydney Trains advises there is an 11kV High voltage Aerial Transmission Lines in close proximity to the proposed works. All works within 6 metres of the nearest transmission line conductor must comply with:

- ISSC 20 – Guideline for the Management of Activities within Electricity Easements and Close to Electricity Infrastructure.

- The Safe Approach Distances (SADs) in the Sydney Trains Document titled "SMS-06-GD-0268 – Working Around Electrical Equipment".

(31) Sydney Trains Condition 8

The design, installation and use of lights, signs and reflective materials, whether permanent or temporary, which are (or from which reflected light might be) visible from the rail corridor must limit glare and reflectivity to the satisfaction of the light rail operator. The Principal Certifying Authority is not to issue the Construction Certificate until written confirmation has been received from Sydney Trains confirming that this condition has been satisfied.

(32) Sydney Trains Condition 9

If required by Sydney Trains, prior to the issue of a Construction Certificate a Risk Assessment/Management Plan and detailed Safe Work Method Statements (SWMS) for the proposed works are to be submitted to Sydney Trains for review and comment on the impacts on rail corridor. The Principal Certifying Authority is not to issue the Construction Certificate until written confirmation has been received from Sydney Trains confirming that this condition has been satisfied.

(33) Sydney Trains Condition 10

Prior to the issuing of a Construction Certificate the Applicant must submit to Sydney Trains a plan showing all craneage and other aerial operations for the development and must comply with all Sydney Trains requirements. If required by Sydney Trains, the Applicant must amend the plan showing all craneage and other aerial operations to comply with all Sydney Trains requirements. The Principal Certifying Authority is not to issue the Construction Certificate until written confirmation has been received from the Sydney Trains confirming that this condition has been satisfied.

(34) Sydney Trains Condition 11

Unless advised by Sydney Trains in writing, all excavation, shoring and piling works within 25m of the rail corridor are to be supervised by a geotechnical engineer experienced with such excavation projects and who holds current professional indemnity insurance

(34) Sydney Trains Condition 12

If required, prior to the issue of a Construction Certificate the Applicant is to contact Sydney Trains Engineering & Maintenance Interface to determine the need for public liability insurance cover. If insurance cover is deemed necessary this insurance be for sum as determined by Sydney Trains and shall not contain any exclusion in relation to works on or near the rail corridor, rail infrastructure and must be maintained for the duration specified by Sydney Trains. The Applicant is to contact Sydney Trains Engineering & Maintenance Interface to obtain the level of insurance required for this particular proposal. Prior to issuing the Construction Certificate the Principal Certifying Authority must witness written proof of this insurance in conjunction with Sydney Trains written advice to the Applicant on the level of insurance required.

(35) Sydney Trains Condition 13

If required, prior to the issue of a Construction Certificate the Applicant is to contact Sydney Trains Engineering & Maintenance Interface to determine the need for the lodgement of a Bond or Bank Guarantee for the duration of the works. The Bond/Bank Guarantee shall be for the sum determined by Sydney Trains. Prior to issuing the Construction Certificate the Principal Certifying Authority must witness written advice from Sydney Trains confirming the lodgement of this Bond/Bank Guarantee.

(36) Sydney Trains Condition 14

Sydney Trains or Transport for NSW (TfNSW), and persons authorised by those entities for the purpose of this condition, must be permitted to inspect the site of the development and all structures to enable it to consider whether those structures have been or are being constructed and maintained in accordance with the approved plans and the requirements of this consent, on giving reasonable notice to the principal contractor for the development or the owner or occupier of the part of the site to which access is sought.

(37) Sydney Trains Condition 15

Copies of any certificates, drawings, approvals/certification or documents endorsed by, given to or issued by Sydney Trains or RailCorp must be submitted to Council for its records prior to the issuing of the applicable Construction Certificate or Occupation Certificate.

(38) Sydney Trains Condition 16

Any conditions issued as part of Sydney Trains approval/certification of any documentation for compliance with the Sydney Trains conditions of consent, those approval/certification conditions will also form part of the consent conditions that the Applicant is required to comply with.

(39) Sydney Trains Condition 17

Where a condition of consent requires Sydney Trains or Transport for NSW endorsement the Principal Certifying Authority is not to issue a Construction Certificate or Occupancy Certificate, as the case may be, until written confirmation has been received from those entities that the particular condition has been complied with. The issuing of staged Construction Certificates dealing with specific works and compliance conditions can be issued subject to written agreement from those entities to which the relevant conditions applies.

(40) Sydney Trains Condition 18

If required by Sydney Trains, the Applicant must give Sydney Trains written notice at least 5 business days before any of the following events occur within 25 metres of the rail corridor land:
a. site investigations;
b. foundation, pile and anchor set out;

c. set out of any other structures below ground surface level or structures which will transfer any load or bearing;
d. foundation, pile and anchor excavation;
e. other excavation;
f. surveying of foundation, pile and anchor excavation and surveying of as-built excavations;
g. other concreting; or
h. any other event that Sydney Trains has notified to the Applicant.

(41) Sydney Trains Condition 19

The Applicant must ensure that at all times they have a representative (which has been notified to Sydney Trains in writing), who:

a. oversees the carrying out of the Applicant's obligations under the conditions of this consent and in accordance with correspondence issued by Sydney Trains;
b. acts as the authorised representative of the Applicant; and
c. is available (or has a delegate notified in writing to Sydney Trains that is available) on a 7 day a week basis to liaise with the representative of Sydney Trains, as notified to the Applicant.

(42) Sydney Trains Condition 20

Without in any way limiting the operation of any other condition of this consent, the Applicant must, during demolition, excavation and construction works, consult in good faith with Sydney Trains in relation to the carrying out of the development works and must respond or provide documentation as soon as practicable to any queries raised by Sydney Trains in relation to the works.

(43) Sydney Trains Condition 21

Where a condition of consent requires consultation with Sydney Trains, the Applicant shall forward all requests and/or documentation to the relevant Sydney Trains external party interface team. In this instance the relevant interface team is Central Interface and they can be contacted via email on Central_Interface@transport.nsw.gov.au.

B Design Changes

Nil

C Conditions that must be satisfied prior to issuing/releasing a Construction Certificate

(1) Waste Management Plan

Prior to the issue of a Construction Certificate, the applicant shall prepare and submit a Waste Management Plan in accordance with the provisions of Inner West Council Comprehensive Development Control Plan 2016 - Planning For Less Waste and the Waste Planning Guide for Development Applications (Planning for Less Waste, prepared by the Regional Waste Boards), including:

(a) Estimations of quantities and type of materials to be reused, recycled or left over for removal from site;

(b) Identification on a plan of on site material storage areas during construction, waste storage, recycling and composting areas;

(c) Details of construction materials and methods to be used to minimise the production of waste in the completion of the new building work.

(d) How waste is to be treated on the site.

(e) How any residual non-reusable and non-recyclable waste is to be disposed of and including details of the approved waste disposal outlets where disposal will take place.

(2) Construction and Site Management Plan

Prior to the issue of a Construction Certificate the applicant shall submit to Council or the accredited certifier a construction and site management plan that clearly sets out the following:

(a) what actions and works are proposed to ensure safe access to and from the site and what protection will be provided to the road and footpath area from building activities, crossings by heavy equipment, plant and materials delivery, or static loads from cranes, concrete pumps and the like,

(b) the proposed method of loading and unloading excavation machines, building materials, formwork and the erection of any part of the structure within the site,

(c) the proposed areas within the site to be used for the storage of excavated material, construction materials and waste and recycling containers during the construction period,

(d) how it is proposed to ensure that soil/excavated material is not transported on wheels or tracks of vehicles or plant and deposited on surrounding roadways,

(e) the proposed method of support to any excavation adjacent to adjoining properties, or the road reserve. The proposed method of support is to be designed by a chartered Civil Engineer or an accredited certifier.

Where it is proposed to:

pump concrete from within a public road reserve or laneway, or
stand a mobile crane within the public road reserve or laneway,or
use part of Council's road/footpath area,
pump stormwater from the site to Council's stormwater drains, or
store waste and recycling containers, skip, bins, and/or building materials on part of Council's footpath or roadway,

An Activity Application for a construction zone, a pumping permit, an approval to stand a mobile crane or an application to pump water into a public road, together with the necessary fee shall be submitted to Council and approval obtained before a Construction Certificate is issued.

Note: A separate application to Council must be made for the enclosure of a public place (hoarding).

(3) Erosion & sedimentation control-management plan

Prior to issue of a construction certificate the applicant shall prepare an erosion and sedimentation control plan in accordance with Part 4 of the guidelines titled "*Pollution Control Manual for Urban Stormwater*", as recommended by the Environmental Protection Authority.

Any stormwater runoff collected from the site must be treated in accordance with the Guidelines, before discharge off the site to comply with the *Protection of the Environment Operations Act 1997* or other subsequent Acts.

Where sedimentation control basins are provided discharge shall be to the requirements of the Environment Protection Authority.

Applicants are further advised to refer to the following publications for additional information:

(a) *"Sedimentation and Erosion Control"* - Department of Conservation and Land Management.

(b) "*Soil and Water Management for Urban Development"* - Department of Housing.

The plan must be submitted with the application for a construction certificate.

Further information may be obtained from:

Environment Protection Officer
Environment Protection Authority
Inner Sydney Region
Locked Bag 1502
BANKSTOWN NSW 2200

(4) Permits – General

Where it is proposed to occupy or carry out works on public roads or Council controlled lands, the person acting on this consent shall obtain all applicable Permits from Council in accordance with Section 68 (Approvals) of the Local Government Act 1993 and/or Section 138 of the Roads Act 1993. Permits are required for the following activities:

a) Work zone (designated parking for construction vehicles). Note that a minimum of 2 months should be allowed for the processing of a Work Zone application.
b) A concrete pump across the roadway/footpath
c) Mobile crane or any standing plant
d) Skip bins
e) Scaffolding/Hoardings (fencing on public land)
f) Public domain works including vehicle crossing, kerb & guttering, footpath, stormwater, etc.
g) Awning or street verandah over footpath
h) Partial or full road closure
i) Installation or replacement of private stormwater drain, utility service or water supply

Contact Council's Road Access team to ensure the correct Permit applications are made for the various activities.

Applications for such Permits shall be submitted and approved by Council prior to the commencement of the works associated with such activity

(5) Long service levy

Compliance with Section 109F of the Environmental Planning and Assessment Act 1979 – payment of the long service levy under Section 34 of the Building and Construction Industry Long Service Payments Acts 1986 – is required. All building of $25,000.00 and over are subject to the payment of a Long Service Levy fee. A copy of the receipt for the payment of the Long Service Levy shall be provided to the Principal Certifying Authority (PCA) prior to the issue of a Construction Certificate. Payments can be made at Long Service Payments Corporation offices or most Councils.

(6) Section 7.12 Contributions

A Section 7.12 Contribution fee *of* ***$163,443.74*** is to be paid in accordance with Section 7.12 of the *Environmental Planning and Assessment Act 1979.* The fee has been calculated based upon the construction of 180 boarding house rooms with a credit for 3,157m^2 of existing commercial GFA.

Community Infrastructure Type	Contribution
Local Roads	-$3,579.05
Local Public Transport Facilities	$63,109.56

Local Car Parking Facilities		$0.00
Local Open Space and Recreation Facilities		$0.00
Local Community Facilities		$53,488.18
Plan Preparation and Administration		$50,425.04
	TOTAL	**$163,443.74**

(7) Services and infrastructure adjustment/relocation

The applicant shall meet the full cost for Telstra, Sydney Water, Energy Australia, AGL Electricity/AGL Retail Energy or alternative service/energy providers to adjust/relocate their services/infrastructure as required. The applicant shall make the necessary arrangements with the relevant service authority or relevant retail energy company.

(For information on the location of services contact the "Dial before you Dig" service on 1100.)

Documentary evidence from the utility authorities/retail energy company confirming that all of their requirements have been satisfied shall be submitted to Council with the Construction Certificate.

(8) Energy Efficiency

The development must be designed and constructed to maximise energy efficiency, including wall and ceiling insulation and energy efficient appliances/hot water/cooling systems. Documentation detailing the energy efficiency features of the development is to be shown on the plans to be provided with the Construction Certificate.

(9) Footpath/laneway – photographs to be submitted

Prior to the release of the Construction Certificate, the applicant shall lodge with Council photographs of the roadway, footpath and/or laneway at the property indicating the state of the relevant pavements. At the completion of construction, again at the expense of the applicant, a new set of photographs is to be taken to determine the extent, if any, of any damage which has occurred to the relevant pavements. If any damage has occurred, the applicant shall meet the full cost to repair or reconstruct these damaged areas to Council's relevant standard.

(10) Erosion, dust, topsoil and sediment control

Temporary measures shall be provided during construction eg. bunding, shade cloth to prevent dust leaving the site, sandbags around Council/private stormwater pits etc. in order to prevent sediment, dust, topsoil and polluted waters discharging from the site. Plans showing such measures shall be submitted and approved by Council/certifier prior to the release of the Construction Certificate.

(11) Lighting Details

Lighting details of the pedestrian areas, parking areas and all entrances must be submitted to the Certifying Authority's satisfaction prior to the release of the Construction Certificate. External lighting must be provided, including, at a minimum, at the main pedestrian entry to a building and all communal areas and should be directed towards access or egress routes. To avoid creating a nuisance by light spillage onto neighbouring properties, outdoor lighting must comply with Australian Standard *AS4281-1997-Control of the obtrusive effects of outdoor lighting for details*.

(12) General Acoustic

The proposed use of the premises and the operation of all plant and equipment shall not give rise to an 'offensive noise' as defined in the Protection of the Environment Operations Act 1997 and Regulations.

In this regard, the operation of the premises and plant and equipment shall not give rise to a sound pressure level at any affected premises that exceeds the background $L_{A90,\ 15min}$ noise level, measured in the absence of the noise source/s under consideration by 5dB(A). The source noise level shall be assess as an $L_{Aeq,\ 15min}$ and adjusted in accordance with the NSW Environment Protection Authority's Industrial Noise Policy and Environmental Noise Control Manual (sleep disturbance).

An acoustic report prepared by a suitably qualified and experienced acoustic consultant shall be provided to the satisfaction of the Principal Certifying Authority demonstrating that noise and vibration from the operation of the premises including the use, plant and equipment will satisfy the stipulated criteria above and relevant provisions of the Protection of the Environment Operations Act 1997 and Regulations and relevant state and local policies and guidelines. Recommendations must be consistent with the approved plans.

Details demonstrating compliance with the requirements of this condition are to be submitted to the Principal Certifying Authority for approval prior to the issue of any Construction Certificate.

(13) Air Conditioning

Any air conditioning unit on the site must be installed and operated at all times so as not to cause "Offensive Noise" as defined by the Protection of the Environment (Operations) Act 1997.

The system/s shall be operated as follows:

a) Domestic air conditioners must not be audible in nearby dwellings between:

   i) 10:00pm to 7:00am on Monday to Saturday: and
   ii) 10:00pm to 8:00am on Sundays and Public Holidays.

b) At any other time the systems and associated equipment shall not give rise to a sound pressure level at any affected premises that exceeds the background $L_{A90,\ 15min}$ noise level, measured in the absence of the noise source/s under consideration by 5dB(A).

The source noise level shall be assessed as an $L_{Aeq,\ 15min}$ and adjusted in accordance with the NSW Environment Protection Authority's Industrial Noise Policy and Environmental Noise Control Manual (sleep disturbance).

Air conditioning units must be installed in accordance with plans referenced in condition 1 or to satisfy provisions of the State Environmental Planning Policy (Exempt & Complying Codes) 2008.

Details demonstrating compliance with the requirements of this condition and the acoustic measures to be employed to achieve compliance with this condition are to be submitted for approval to the Principal Certifying Authority prior to the issue of any Construction Certificate.

(14) Acoustic – Road & Rail

To minimise the impact of noise from the adjoining major road and / or rail corridor on the occupants, the Construction Certificate plans shall incorporate and the building constructed in accordance with the recommendations of the following acoustic report approved as part of this application.

Prepared by	Dated	Reference
Acoustic Logic	4 December 2019	Project No. 20181687.1

Details demonstrating compliance with the requirements of this condition are to be detailed on the plans and accompanying documentation submitted to satisfaction of the Principal Certifying Authority prior to the issue of any Construction Certificate.

(15) Schedule of Conservation Works

Prior to the issue of the Construction Certificate, the Certifying Authority must be provided with a Schedule of Conservation Works. The detailed documentation of the conservation works to the former Ambulance Station, 73-75 Carlton Crescent is to be prepared by a qualified Heritage Architect in accordance with the Australia ICOMOS Burra Charter 2013.

The schedule is to detail the conservation of all significant fabric, including but not limited to the following: double hung or casement windows, brickwork, terracotta tilework to the front façade and roof, internal detailing including timber floors, timber skirting boards, timber panelled doors and fanlights, fireplaces, picture rails and any fibrous plaster ceilings (above the existing lowered ceilings). All of these elements are to be repaired not replaced, where possible.

The proposed works are to be carried out in a manner that minimises demolition, alterations and new penetrations/fixings to the significant fabric of the existing building. The schedule of conservation works is to include patching once redundant services, including air conditioning units, have been removed.

Each element that is to be retained and conserved is to be identified as such on the Construction Certificate Drawings, including the existing Ambulance Station signage and logo

(16) Painting of Facades

Prior to the issue of a Construction Certificate, the Certifying Authority must be provided with an external Colour Scheme including elevations from a suitably qualified Heritage Architect indicating:

a) External paint or limewash colours that are based on the original colour scheme and surface finish, evidence of which is to be provided with the Colour Schedule. The original colours of the Ambulance Service logo, the string course and friezes, including the decorative frieze at ground level and the rafters and soffit are to be confirmed.

b) Existing unpainted brickwork is not be painted, bagged or rendered or sealed but to remain as original brickwork.

c) Breathable finishes such as a cement paint, limewash or mineral paint are to be employed where the existing masonry or render had a paint finish.

d) Modern paint films which do not allow moisture transmission and have a tendency to blister are not to be used.

e) All original brickwork is to be depicted on the elevations with a notation that they are to remain unpainted.

f) Face brickwork is not to be sealed or cleaned using abrasive technique or acid washing.

(17) Security Damage Bond

Prior to the commencement of demolition works or a Construction Certificate being issued for works approved by this development consent (whichever occurs first), a security deposit and inspection fee must be paid to Council to cover the cost of making good any damage caused to any Council property or the physical environment as a consequence of carrying out the works and as surety for the proper completion of any road, footpath and drainage works required by this consent.

Security Deposit	$83,906.34

Inspection fee	$230.65

Payment will be accepted in the form of cash, bank cheque, EFTPOS/credit card (to a maximum of $10,000) or bank guarantee. Bank Guarantees must not have an expiry date.

The inspection fee is required for Council to determine the condition of the adjacent road reserve and footpath prior to and on completion of the works being carried out.

Should any of Council's property and/or the physical environment sustain damage during the course of the demolition or construction works, or if the works put Council's assets or the environment at risk, or if any road, footpath or drainage works required by this consent are not completed satisfactorily, Council may carry out any works necessary to repair the damage, remove the risk or complete the works. Council may utilise part or all of the security deposit to restore any damages, and Council may recover, in any court of competent jurisdiction, any costs to Council for such restorations.

A request for release of the security may be made to the Council after all construction work has been completed and a final Occupation Certificate issued.

The amount nominated is only current for the financial year in which the consent was issued and is revised each financial year. The amount payable must be consistent with Council's Fees and Charges in force at the date of payment.

Requirements of this condition are to be met prior to works commencing or prior to release of a Construction Certificate (whichever occurs first). Details demonstrating compliance with the requirements of this condition are to be submitted to the satisfaction of the Principal Certifying Authority prior to the issue of any Construction Certificate.

(18) Public Domain works

In order to provide satisfactory vehicular and pedestrian access, drainage, landscaping and aesthetic improvements to the public domain adjacent to the site, the following works shall be undertaken at no cost to Council:

a) The public domain along all frontages of the site inclusive of footpath paving, kerb, street trees, landscaping, street furniture, etc. shall be reconstructed and upgraded in accordance with the Public Domain Design Guide;
b) New kerb and gutter along the frontage of the site. The kerb type (concrete or stone) shall be consistent with the majority of kerb type at this location.
c) Cross sections are to be provided at the boundary at a minimum distance of every 5m and at all pedestrian and vehicular access locations. Note, the cross fall of the footpath shall be set at 2.5%. These sections will set the alignment levels at the boundary.
d) SW Pipe in Hardie Avenue including, long section, pit details, services, backfill and restoration details.

Full detailed construction plans and specifications shall be submitted to Council for approval under Section 138 of the Roads Act 1993 before the issue of a Construction Certificate with all works completed before to the issue of an Occupation Certificate.

(19) Plant and Equipment Location

All plant and associated equipment must be located within the approved building envelope and is not be located on the roof (except as shown on the approved plans). Details on the location of all plant and equipment must be consistent with the approved plans and provided prior to the issue of a Construction Certificate.

Details demonstrating compliance with the requirements of this condition are to be submitted to the satisfaction of the Certifying Authority prior to the issue of any Construction Certificate.

(20) Redundant crossing removal fee

Any redundant crossings are to be removed and replace with kerbing and other ancillary works where necessary. Note: Cost of this work to be borne by the applicant.

(21) Security devices/measures

In order to achieve satisfactory levels of surveillance and ongoing security on the site, the following shall occur:

(a) To Street/Road ground and first floor level windows, shall have fitted security locking devices, which comply with the relevant Australian Standard.

(b) Ground floor and entry porticos shall have as a minimum double barrel security and fire locks.

Details to be shown on the construction certificate.

(22) Preparation of geotechnical report

To ensure that the structural integrity of the proposal and neighbouring buildings will be maintained, a full geotechnical report must be submitted to the Council or the PCA prior to the issue of a construction certificate and prior to the commencement of excavation works. The report must include an investigation of site and soil conditions as well as the proposed means of construction and must contain, where required, recommendations to ensure that excavation, backfilling and construction, including temporary works during construction, will not affect the structural integrity of neighbouring buildings or the structural stability of neighbouring public land, property or services. The report is to be prepared and certified by an appropriately qualified practicing geotechnical engineer.

All demolition, excavation, backfilling and construction must be undertaken in accordance with the recommendations of the geotechnical report.

Details are to be submitted with the Construction Certificate.

(23) Plantation or recycled timbers

To minimise the damage to the environment, no rainforest timbers or timbers cut from old growth forests are to be used in the construction of buildings.

The Construction Certificate is to specify the timbers to be used. These are to be limited to plantation timbers grown on Australian farms, or State Forest Plantations, or recycled timbers.

(24) Water conservation

Water saving devices must be fitted to all showers and dual flush cisterns installed within all WC/ sanitary facilities provided throughout the development to reduce ongoing water consumption. Documentation to be shown on the plans to be provided with the Construction Certificate

(25) Ventilation

To ensure that adequate provision is made for ventilation of the building all mechanical and/or natural ventilation systems shall be designed, constructed and installed in accordance with the provisions of:

(a) *Building Code of Australia.*
(b) AS 1668.1 - 1998.
(c) AS 1668.2 - 1991.
(d) *Public Health Amendment Regulation 2003*
(e) *Public Health Act 1991*
(f) Work Cover Authority.
(g) AS/NZS 3666.1 - 2002.

Evidence from an appropriately qualified person certifying that these design requirements have been met shall accompany the application for the Construction Certificate.

(26) Water efficient irrigation system

The communal open space areas shall be provided with a water efficient irrigation system to enable effective landscape maintenance. Details shall be included with the landscape plan to be submitted with the Construction Certificate.

(27) Garbage Bay

To ensure that waste water from washing bin is treated in an acceptable manner the garbage bay shall be designed and constructed to ensure that waste water is discharged to the sewer in accordance with the requirements of Sydney Water.

The bin storage area must:

- be well-lit with artificial lighting to be provided. Control switches to be located both outside and inside the room in close proximity to the entry door (DCP-DS 1.6)
- have hot and cold water outlet with hose cock for cleaning of the bins and storage areas (DCP- DS 1.5)
- drain to sewer
- have adequate ventilation which complies with provisions of Australian Standard 1668.2012 (DCP- DS 1.7)

Details demonstrating compliance with the requirements of this condition are to be submitted to the satisfaction of the Principal Certifying Authority prior to the issue of any Construction Certificate.

(28) Registration of Easement

Before the issue of the Construction Certificate deposited plans detailing the creation of the required stormwater easement must be submitted for registration with the relevant authority.

All documentation must be in accordance with the requirements of Section 88B of the Conveyancing Act.

D Conditions that must be complied with before work commences

(1) Notice of Commencement – Notification of Works

Work must not commence until the Principal Certifying Authority or the person having the benefit of the development consent has given Notification in Writing to Council no later than two days before the building work commences.

(2) Requirement for a Construction Certificate

In accordance with the provisions of Section 81A of the *Environmental Planning and Assessment Act 1979* the erection of a building and/or construction works must not commence until:

(a) detailed plans and specifications of the building have been endorsed with a Construction Certificate by:

  (i) Council; or
  (ii) an accredited certifier; and

(b) a principal certifying authority (PCA) has been appointed and the Council has been notified in writing of the appointment, and

(c) at least two days notice, in writing, has been given to Council of the intention to commence work.

The documentation required under this condition shall show that the proposal complies with all development consent conditions and the *Building Code of Australia.*

Note: If the principal certifying authority is the Council, the appointment will be subject to the payment of a fee for the service to cover the cost of undertaking building work and / or civil engineering inspections.

WARNING: Failure to obtain a Construction Certificate prior to the commencement of any building work is a serious breach of Section 81A(2) of the *Environmental Planning & Assessment Act 1979.* It is a criminal offence that attracts substantial penalties and may also result in action in the Land and Environment Court and orders for demolition.

(3) Inspections required by Principal Certifying Authority

Inspections shall be carried out at different stages of construction by Council or an accredited certifier. If Council is selected as the Principal Certifying Authority (PCA) the inspection fees must be paid for in advance which will be calculated at the rate applicable at the time of payment.

(4) Sanitary facilities - demolition/construction sites

Toilet facilities are to be provided, at or in the vicinity of the work site on which work involved in the erection or demolition of a building is being carried out, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.

The provision of toilet facilities in accordance with this clause must be completed before any other work is commenced.

(5) Site Controls

Sediment and erosion controls must be in place before work is commenced on the site. The control strategies must be consistent with the technical requirements set out in the Sydney Coastal Councils' *Stormwater Pollution Control Code for Local Government*.

Material from the site is not to be tracked onto the road by vehicles entering or leaving the site. At the end of each working day any dust/dirt or other sediment shall be swept off the road and contained on the site and not washed down any stormwater pit or gutter.

A sediment and erosion control plan must be prepared and identify appropriate measures for bunding and siltation fencing. Any such erosion and sedimentation controls shall also include the protection of stormwater inlets or gutter systems within the immediate vicinity of the site.

The sediment and erosion control measures are to be inspected daily and defects or system failures are to be repaired as soon as they are detected.

(6) Layout of buildings

The layout of all external walls, including retaining walls and contiguous piling must be checked and verified by survey prior to the commencement of construction to ensure that building construction complies with the development consent and does not encroach beyond the boundaries of the site.

(7) Building location - check survey certificate

To ensure that the location of the building satisfies the provision of the approval, a check survey certificate shall be submitted to the Principal Certifying Authority either prior to the pouring of the ground floor slab or at dampcourse level, whichever is applicable or occurs first, indicating the: -

(i) location of the building with respect to the boundaries of the site;

(ii) level of the floor in relation to the levels on the site (all levels are to be shown relative to Australian Height Datum);

(iii) site coverage of the buildings on the site.

(8) Boundary identification prior to construction

The boundary shall be identified by survey prior to the pouring of any footings and concrete slabs.

(9) Crane permit

Should the applicant need to use a crane during the course of building, it will be necessary to first obtain a "Crane Permit" from Council. A fee of is payable for the permit. The approval of other authorities (eg Police Department, RMS, Sydney Trains) may be required for the use of a crane.

(10) Site fencing/security

The site must be appropriately secured and fenced to the satisfaction of Council during demolition, excavation and construction work to ensure there are no unacceptable impacts on the amenity of adjoining properties. Permits for hoardings and or scaffolding on Council land must be obtained and clearly displayed on site.

(11) Dilapidation Reports

A Dilapidation Report on the current structural condition of the existing buildings at 72 Carlton Crescent, Summer Hill must be prepared by a suitability qualified individual. The Dilapidation Report must be completed and submitted to the owner of the subject property and to Council prior to the commencement of any demolition, excavation or construction works. At the completion of the works, a second Dilapidation Report recording the structural condition must be prepared. That Report must be submitted to the owner of the subject property and to Council.

In the event that access to the site cannot be obtained then the principle certifying authority may issue a construction certificate without the dilapidation report being completed. Note that this is to only occur once it has been demonstrated that reasonable attempts to gain access have been made. Copies of such attempts must be submitted to Council as part of any Construction Certificate.

(12) Site fencing/security

The site must be appropriately secured and fenced to the satisfaction of Council during demolition, excavation and construction work to ensure there are no unacceptable impacts on the amenity of adjoining properties. Permits for hoardings and or scaffolding on Council land must be obtained and clearly displayed on site.

(13) Support for neighbouring buildings and notice to adjoining owners

(1) If an excavation associated with the erection or demolition of a building extends below the level of the base of the footings of a building on an adjoining allotment of land, the person causing the excavation to be made:

(a) must preserve and protect the building from damage, and

(b) if necessary, must underpin and support the building in an approved manner, and

(c) must at least 7 days before excavating below the level of the base of the footings of a building on an adjoining allotment of land, give notice of intention to do so to the owner of the adjoining allotment of land and furnish particulars of the excavation to the owner of the building being erected or demolished.

(2) The owner of the adjoining allotment of land is not liable for any part of the cost of work carried out for the purposes of this clause, whether carried out on the allotment of land being excavated or on the adjoining allotment of land.

Notes:

(i) Details of underpinning works, prepared and certified by a practicing structural engineer shall be submitted to and approved by the Principal Certifying Authority prior to the commencement of any works.
(ii) allotment of land includes a public road and any other public place.

(14) Demolition work plan

Prior to demolition, the applicant shall submit a Work Plan prepared in accordance with AS 2601 by a person with suitable expertise and experience to the Principal Certifying Authority. The Work Plan shall identify any hazardous materials, the method of demolition, the precautions to be employed to minimise any dust nuisance and the disposal methods for hazardous materials.

(15) Structural Engineering Details

Structural engineer's details prepared and certified by a practising structural engineer for all reinforced concrete and structural members is to be submitted to the Principal Certifying Authority for approval.

(16) Asbestos Removal

An Asbestos Survey prepared by a suitably qualified Occupational Hygienist shall be prepared for the premises. The Survey is to incorporate appropriate Asbestos removal and disposal methods in accordance with the requirements of WorkCover NSW, NSW Environmental Planning and Assessment Amendment (Asbestos) Regulation 2009 and NSW Environment Protection Authority, Safe Removal of Asbestos 2nd Edition [NOHSC: 2002 (2005)] and conditions of this consent.

A copy of any WorkCover approval documents is to be included as part of the documentation.

Details demonstrating compliance with the requirements of this condition are to be submitted to the satisfaction of the Principal Certifying Authority prior to any works on site commencing or the issue of the Construction Certificate (whichever occurs first).

(17) Archival Record

Prior to the commencement of works on site a detailed photographic record is to be made of the original section of the Ambulance Station, including the exterior, the ground and first floor level and the main portion of the roof. Each wall is to be photographed. Typical repeated elements such as windows and doors are also to be photographed. The images are to be cross referenced on floor plans. The original ceilings are to be photographed once the later lower ceilings have been removed. This record is to be submitted as PDFs with the Construction Certificate and lodged with Council.

(18) Dilapidation – minor

The person acting on this consent shall submit to the Principal Certifying Authority a dilapidation report including colour photos showing the existing condition of the footpath and roadway adjacent to the site before the issue of a Construction Certificate.

(19) Hoardings

The person acting on this consent shall ensure the site is secured with temporary fencing prior to any works commencing.

If the work involves the erection or demolition of a building and is likely to cause pedestrian or vehicular traffic on public roads or Council controlled lands to be obstructed or rendered inconvenient,

or building involves the enclosure of public property, a hoarding or fence must be erected between the work site and the public property. Additionally an awning is to be erected, sufficient to prevent any substance from, or in connection with, the work falling onto public property, where necessary.

Separate approval is required from Council under the Roads Act 1993 to erect a hoarding or temporary fence or awning on public property. Approvals for hoardings, scaffolding on public land must be obtained and clearly displayed on site for the duration of the works.

Any hoarding, fence or awning is to be removed when the work is completed and must be maintained clear of any advertising.

(20) Traffic Management Plan

Prior to Any Demolition, the Certifying Authority, must be provided with a detailed Construction Traffic Management Plan (CTMP), prepared by an appropriately qualified Traffic Management Consultant with RMS accreditation. The Certifying Authority must approved by the CTMP prior to the commencement of any works, including demolition. The Certifying Authority must ensure that the CTMP instructs vehicles to use State and Regional and Collector Roads to the maximum extent with the use of Local Roads as final approach to the development site via the most suitable direct route.

The following matters should be addressed in the CTMP (where applicable):

a) Description of the demolition, excavation and construction works;
b) Site plan/s showing the site, roads, footpaths, site access points and vehicular movements;
c) Size, type and estimated number of vehicular movements (including removal of excavated materials, delivery of materials and concrete to the site);
d) Proposed route(s) from the arterial (state) road network to the site and the proposed route from the site back to the arterial road network;
e) Impacts of the work and vehicular movements on the road network, traffic and pedestrians and proposed methods to safely manage pedestrians and construction related vehicles in the frontage roadways;
f) Any Traffic Control Plans (TCP's) proposed to regulate traffic and pedestrian movements for construction activities (such as concrete pours, crane installation/removal etc.);
g) Proposed hours of construction related activities and vehicular movements to and from the site;
h) Current/proposed approvals from other Agencies and Authorities (including Roads and Maritime Services, Police and State Transit Authority);
i) Any activities proposed to be located or impact upon Council's road, footways or any public place;
j) Measures to maintain public safety and convenience;
k) Any proposed road and/or footpath closures;
l) Turning areas within the site for construction and spoil removal vehicles, allowing a forward egress for all construction vehicles on the site;
m) Locations of work zones (where it is not possible for loading/unloading to occur on the site) in the frontage roadways accompanied by supporting documentation that such work zones have been approved by the Local Traffic Committee and Council;
n) Location of any proposed crane and concrete pump and truck standing areas on and off the site (and relevant approvals from Council for plant on road);
o) A dedicated unloading and loading point within the site for all construction vehicles, plant and deliveries;
p) Material, plant and spoil bin storage areas within the site, where all materials are to be dropped off and collected;
q) On-site parking area for employees, tradespersons and construction vehicles as far as possible;
r) Proposed areas within the site to be used for the storage of excavated material, construction materials and waste and recycling containers during the construction period; and
s) How it is proposed to ensure that soil/excavated material is not transported onto surrounding footpaths and roadways.

t) Swept Paths for the proposed construction vehicles to demonstrate that the needed manoeuvres can be achieved without causing any nuisance.

(21) Public Liability Insurance

Any person acting on this consent or any contractors carrying out works on public roads or Council controlled lands shall take out Public Liability Insurance with a minimum cover of twenty (20) million dollars in relation to the occupation of, and approved works within those lands. The Policy is to note, and provide protection for Inner West Council, as an interested party and a copy of the Policy must be submitted to Council prior to commencement of the works. The Policy must be valid for the entire period that the works are being undertaken on public property.

E Conditions that must be complied with during construction or demolition

(1) Plans to be available on site

The Council stamped approved plans, Development Consent and Construction Certificate shall be held on site to be produced unobliterated to Council's officer at any time when required.

(2) Locate structures within boundaries

The proposed structure(s) to be erected must stand wholly within the boundaries of the allotment.

(3) Spoil and building materials on road and footpath

All building materials shall be stored wholly within the property boundaries and shall not be placed on the footpath, grass verge or roadway without prior written approval of Council.

Bulk refuse bins shall not be placed on the grass verge, footpath or roadway without Council permission. Application forms and details of applicable fees are available from Council's One Stop Shop telephone 9716 1800.

(4) Signs to be erected on building and demolition sites

(1) A sign must be erected in a prominent position on any work site on which work involved in the erection or demolition of a building is being carried out:

(a) stating that unauthorised entry to the work site is prohibited; and

(b) showing the name and address of the contractor for the building work and the person in charge of the work site and a telephone number at which the person may be contacted outside working hours; and

(c) showing the name, address and telephone number of the Principal Certifying Authority appointed for the building works.

(2) Any-sign shall be maintained and not removed until work has been finished.

(5) Demolition/excavation/construction - hours of work

Unless otherwise approved by Council, excavation, demolition, construction or subdivision work shall only be permitted during the following hours:

a) 7:00 am to 6.00 pm, Mondays to Fridays, inclusive (with demolition works finishing at 5pm);

b) 8:00 am to 1:00 pm on Saturdays with no demolition works occurring during this time; and

c) at no time on Sundays or public holidays.

Works may be undertaken outside these hours where they do not create any nuisance to neighbouring properties in terms of dust, noise, vibration etc and do not entail the use of power tools, hammers etc. This may include but is not limited to painting.

In the case that a standing plant or special permit is obtained from Council for works in association with this development, the works which are the subject of the permit may be carried out outside these hours. This condition does not apply in the event of a direction from police or other relevant authority for safety reasons, to prevent risk to life or environmental harm.

Activities generating noise levels greater than 75dB(A) such as rock breaking, rock hammering, sheet piling and pile driving shall be limited to:

8:00 am to 12:00 pm, Monday to Saturday; and
2:00 pm to 5:00 pm Monday to Friday.

The Proponent shall not undertake such activities for more than three continuous hours and shall provide a minimum of one 2 hour respite period between any two periods of such works.

"Continuous" means any period during which there is less than an uninterrupted 60 minute respite period between temporarily halting and recommencing any of that intrusively noisy work.

Noise arising from the works must be controlled in accordance with the requirements of the Protection of the Environment Operations Act 1997 and guidelines contained in the New South Wales Environment Protection Authority Environmental Noise Control Manual.

(6) Demolition requirements/standards

Demolition is to be carried out in accordance with the following:

(a) Australian Standard 2601 and any requirements of the SafeWork NSW.

(b) The Waste Management Plan submitted with the Development Application.

(c) The property is to be secured to prohibit unauthorised entry.

(d) All precautions are to be exercised in the handling, removal and disposal of all asbestos materials. Licensed contractors and the disposal of asbestos is to be carried out in accordance with the requirements of the SafeWork NSW.

(e) All other materials and debris is to be removed from the site and disposed of to approved outlets.

(f) Any demolition on the site is to be conducted in strict accordance with, but not limited to, sections 1.5, 1.6, 1.7, 3.1 and 3.9 of the AS 2601 - 1991, demolition of structures. The following measures must be undertaken for hazardous dust control:

(g) Prior to demolition, the applicant shall submit a Work Plan prepared in accordance with AS 2601 by a person with suitable expertise and experience to the Principal Certifying Authority. The Work Plan shall identify any hazardous materials, the method of demolition, the precautions to be employed to minimise any dust nuisance and the disposal methods for hazardous materials.

(h) Hazardous dust must not be allowed to escape from the site or contaminate the immediate environment. The use of fine mesh dust proof screens, wet-lead safe work practices, or other measures is required.

(i) All contractors and employees directly involved in the removal of hazardous dusts and substances shall wear protective equipment conforming to AS 1716 Respiratory Protective Devices and shall adopt work practices in accordance with SafeWork Requirements (in

particular the SafeWork standard for the *Control of Inorganic Lead At Work* (NOHSC: 1012, 1994) and AS 2641, 1998).

(j) Any existing accumulations of dust (eg; ceiling voids and wall cavities must be removed by the use of an industrial vacuum fitted with a high efficiency particulate air (HEPA) filter and disposed of appropriately.

(k) All dusty surfaces and dust created from work is to be suppressed by a fine water spray. Unclean water from the suppressant spray is not be allowed to enter the street gutter and stormwater systems.

(l) Demolition is not to be performed during high winds that may cause dust to spread beyond the site boundaries without adequate containment.

(m) All lead contaminated material is to be disposed of in accordance with the NSW Environment Protection Authorities requirements.

(n) Construction and demolition waste, particularly timber, bricks and tiles, concrete and other materials need not be disposed of- they can be recycled and resold if segregated properly from any hazardous waste contamination.

(o) Following demolition activities, soil must be tested by a person with suitable expertise to ensure the soil lead levels are below acceptable health criteria for residential areas. Full certification is to be provided for approval by the Principal Certifying Authority.

(7) Materials and colour schemes

Materials of construction are to be as specified in the schedule of finishes submitted with the development application and on the approved plans, except where amended by the conditions hereunder.

(8) Footpath, kerb and gutter protection

The applicant is to take all precautions to ensure footpaths and roads are kept in a safe condition and to prevent damage to Council's property.

Pedestrian access across this footpath must be maintained in good order at all times during work. Any damage caused will be made good by Council at Council's restoration rates, at the applicant's expense.

(9) Road opening permit – Council controlled lands

A road opening permit shall be obtained for all works carried out in public or Council controlled lands. Contact Council's Engineering Services for details.

This road opening permit covers the direct costs involved in the repair/replacement of works where the public or Council controlled lands are specifically damaged/saw cut etc for the construction of services, stormwater pipes, kerb works, bitumen works, footpath works etc. It is *separate* from a Damage Deposit as listed elsewhere in these Conditions of Consent.

(10) Roof guttering and drainage system/disposal of stormwater

The roof shall be provided with a complete guttering and drainage system. Roofwater shall be disposed of by approved drainage lines discharging into the street gutter.

(11) Surface run-off

Allowance shall be made for surface run-off from adjacent properties, and to retain existing surface flow path systems through the site. Any redirection or treatment of these flows shall not adversely affect any other properties.

(12) Termite treatment

Treatment for the protection of the building from subterranean termites shall be carried out in accordance with AS 3660.1:2000 'Protection of Buildings from Subterranean Termites'.

On completion of the installation of the barrier the Principal Certifying Authority shall be furnished with a certificate from the person responsible, stating that the barrier complies with AS 3660.1.

A durable notice shall be permanently fixed to the building in a prominent location, such as the meter box or the like indicating:

- the method of protection;
- the date of installation;
- where a chemical barrier is used, its life expectancy as listed on the National Registration Authority label; and
- the need to maintain and inspect the system on a regular basis.

Due to the present limited effective life of soil chemical treatments, Council does not permit hand spraying as a stand alone method of termite protection. It is recommended that any soil chemical treatment should embrace a reticulation system.

(13) Waterproofing materials/installation – BCA/Australian Standards

Approved products that are impervious to water shall only be used as a substrate or as a lining and as a finish to floors and walls of wet areas (i.e. bathroom/shower room, WC compartment and laundry). Floors and cubicles shall be properly graded and drained to approved outlets.

The wet areas in the building shall be impervious to water as required by Part 3.8.1 of the Building Code of Australia (BCA). The junction between the floor and wall and the construction of the bath shower recess, basin, sink or the like shall be in accordance with the BCA & AS 3740:2004 'Waterproofing of wet areas within residential buildings'.

On completion of the waterproofing of the wet areas, the Principal Certifying Authority shall be furnished with a certificate from the person responsible. This is to state that the materials are suitable for the situation and that the application and/or installation has been carried out in accordance with the manufacturer's instructions, the BCA and AS 3740.

(14) Safety Glazing - BCA

Safety glazing complying with B1 of the Building Code of Australia (BCA) is to be used in every glazed door or panel that is capable of being mistaken for a doorway or unimpeded path of travel. The glazing must comply with AS 1288:2006 'Glass in Buildings – Selection and Installation'.

Framed panels or doors enclosing or partially enclosing a shower or bath shall be glazed with "A" or "B" grade safety glazing material in accordance with AS 1288 and Part 3.6.4 of the BCA.

(15) Fire Detection/Alarm System installation and certification

Smoke alarms must be installed in dwellings in accordance with Clause 3.7.2.3 of the Building Code of Australia (BCA) and AS 3786 on or near the ceiling in -

(a) any storey containing bedrooms -

- between each area containing bedrooms and the remainder of the dwelling, including any hallway associated with the bedrooms

(b) any storey not containing bedrooms.

Smoke alarms must be connected to the consumer mains power and have a stand-by power supply.

The licensed Electrical Contractor shall on completion of the installation of the smoke alarm system, submit to the Principal Certifying Authority a certificate certifying compliance with AS 3000 and AS 3786:1993.

(16) Vibration Criteria – Excavation or Construction

Vibration caused by excavation and construction at any residence or structure outside the site must be limited to:

a) for structural damage vibration, German Standard DIN 4150 Part 3 Structural Vibration in Buildings. Effects on Structures; and
b) for human exposure to vibration, the evaluation criteria set out in the Environmental Noise Management Assessing Vibration: a Technical Guideline (Department of Environment and Conservation, 2006).

Vibratory compactors must not be used in the vicinity of residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified above.

(17) New contamination evidence

Any new information revealed during development works that has the potential to alter previous conclusions about site contamination or hazardous materials shall be immediately notified to the Council and the Principal Certifying Authority.

(18) Maintenance Works

The applicant shall, within fourteen (14) days of notification by Council, execute any and all maintenance works required by Council. In the event that the applicant fails to undertake such work, Council may undertake the required maintenance works, utilising part or all of the maintenance security bond and Council may recover any costs in excess of the security from the applicant.

(19) Stormwater

To provide for adequate site drainage all roof and surface stormwater from the site and any catchment external to the site that presently drains to it, shall be collected in a system of pits and pipelines/channels and major storm event surface flow paths and being discharged to a stormwater drainage system in accordance with the requirements of Council's Stormwater Policy. Please note any stormwater outlets through sandstone kerbs must be carefully core drilled.

(20) Alignment Levels

Alignment levels for the site at all pedestrian and vehicular access locations shall match the proposed back of footpath levels at the boundary. For vehicular access off rear laneways the level at the boundary shall match the invert level of the adjacent gutter plus 150mm at both sides of the vehicle entry.

F Conditions that must be complied with prior to installation of services

Nil

G Conditions that must be complied with before the building is occupied

(1) Compliance with submitted ridge height

A survey report to be submitted upon completion of the works and prior to occupation verifying compliance with the approved ridge height details.

(2) Approval to use/occupy building

The building or any part thereof must not be used or occupied until an Occupation Certificate has been obtained from the Principal Certifying Authority.

Note: If Council is chosen as the Principal Certifying Authority a fee is applicable prior to the release of the Construction Certificate.

(3) Landscaping

Before the issue of an Occupation Certificate, the Certifying Authority must be satisfied that all landscape works have been undertaken in accordance with the approved plan and conditions of consent and must be maintained at all times to Council's satisfaction.

(4) Acoustic report – demonstrating compliance

A report prepared by a suitably qualified and experienced acoustic consultant shall be submitted to Council prior to an Occupation Certificate being issued for the development which demonstrates and certifies that noise and vibration emissions from the development comply with the relevant provisions of the *Protection of the Environment Operations Act 1997*, NSW Environment Protection Authority's Industrial Noise Policy and Noise Control Manual and conditions of Council's approval, including any recommendations of the acoustic report referenced in the conditions of the approval.

Details demonstrating compliance with the requirements of this condition is to be submitted to the satisfaction of the Principal Certifying Authority prior to the issue of any Occupation Certificate.

(5) Contamination Management Plan

Prior to the issue of any interim / final Occupation Certificate, certification from an appropriately qualified environmental consultant is to be provided stipulating that the requirements of the following contamination reports:

Title	Prepared by	Date
Contamination Investigation (Phase 1 and 2), Report No. 52961/110780 (Rev 2)	JBS&G Australia Pty Ltd	30 November 2018

have been complied with throughout excavation, demolition & development work stages. The certification shall also include:

a) A validation and site monitoring report prepared in accordance with relevant guidelines issued under the Contaminated Land Management Act 1997 must be submitted to the Council within one month from completion of the remediation work.

b) A detailed survey of all sites used for landfill disposal must be prepared within one month from completion of the remediation work, and submitted to Council.

c) Identification of the extent and depth of all fill material in relation to existing roadways and buildings. The survey must also include a detailed survey of all site used as landfill disposal pits, identifying boundaries and depth of disposal pits in relation to existing roadways and buildings.

Details demonstrating compliance with the requirements of this condition is to be submitted to the satisfaction of the Principal Certifying Authority prior to the issue of any interim / final occupation certificate.

(6) Petroleum storage – decommissioned in accordance with requirements

A validation report prepared by a suitably qualified and experienced person shall be submitted to Council. The report is to confirm that the underground petroleum storage system has been removed, replace or decommissioned in accordance with The Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008, The Protection Environment Operations

Act 1997 and Australian Standard AS4976-2008: The removal and disposal of underground petroleum storage tanks.

Details demonstrating compliance with the requirements of this condition is to be submitted to the satisfaction of the Principal Certifying Authority prior to the issue of any interim / final occupation certificate.

(7) Disposal of soil

Any soil proposed to be disposed of, off site must be classified, removed and disposed of in accordance with the *EPA Environmental Guidelines; Assessment, Classification and Management of Liquid and Non-Liquid Wastes 1999* and the *Protection of the Environmental Operations Act 1997.*

Details demonstrating compliance with the requirements of this condition are to be submitted to the satisfaction of the Principal Certifying Authority prior to the issue of any Occupation Certificate.

(8) Registration of Use with Council

The premise must be registered with Council's Environment Health Section in accordance with the following relevant legislation:

Boarding House - Boarding Houses Act 2012.

Details demonstrating compliance with the requirements of this condition is to be submitted to the satisfaction of the Principal Certifying Authority prior to the issue of any interim / final occupation certificate.

(9) Remediation Validation

A validation report shall be prepared by a suitably qualified Environmental Consultant and be submitted to Council upon completion of remediation works and prior to the site being occupied. The validation report shall be prepared in accordance with relevant NSW Environment Protection Authority guidelines, including the guidelines 'Consultants Reporting on Contaminated Sites' and shall include:

- Description and documentation of all works performed
- Results of validation testing and monitoring
- Validation results if any imported fill was transferred to site
- Demonstrate how all agreed clean-up criteria and relevant regulations have been satisfied

Confirmation and justification as to the suitability of the site for the proposed use and the potential for off site migration of any residual contaminates.

(10) Public Domain works

All works required to be carried out in connection with drainage, crossings, alterations to kerb and guttering, footpaths and roads resulting from the development shall be completed before the issue of an Occupation Certificate. Works shall be in accordance with Council's Standard crossing and footpath specifications and AUS-SPEC#2-"Roadworks Specifications".

(11) Redundant Vehicle Crossing

All redundant vehicular crossings to the site shall be removed and replaced by kerb and gutter and footpath paving in accordance with Council's Standard crossing and footpath specifications and AUS-SPEC#2-"Roadworks Specifications" before the issue of the Occupation Certificate and at no cost to Council. Where the kerb in the vicinity of the redundant crossing is predominately stone (as determined by Council's Engineer) the replacement kerb shall also be in stone.

(12) No encroachments

Encroachments onto Council's road or footpath of any service pipes, sewer vents, boundary traps, downpipes, gutters, stairs, doors, gates, garage tilt up panel doors or any structure whatsoever shall not be permitted. Any encroachments on to Council road or footpath resulting from the building works will be required to be removed before the issue of the Occupation Certificate.

(13) Service adjustments

You are advised that Council has not undertaken a search of existing or proposed utility services adjacent to the site in determining this application. Any adjustment or augmentation of any public utility services including Gas, Water, Sewer, Electricity, Street lighting and Telecommunications required as a result of the development shall be at no cost to Council and undertaken before the issue of an Occupation Certificate.

(14) Protect sandstone kerb

The existing stone kerb adjacent to the site is of local heritage value and is to be preserved at no cost to Council. Any damage to the stone kerb will require the replacement of the damaged individual stone units before the issue of the Occupation Certificate. Please note any stormwater outlets through sandstone kerbs must be carefully core drilled. Non-compliance with this condition will result in loss of your security deposit.

(15) Kerb and gutter reconstruction

The existing damaged or otherwise defective kerb and gutter, footpath and/or road pavement adjacent to the site shall be restored in accordance with Council's Standard crossing and footpath specifications and AUS-SPEC#2-"Roadworks Specifications", at no cost to Council and before the issue of the Occupation Certificate.

(16) Footpath reconstruction

The existing concrete footpath across the frontage of the site shall be reconstructed in accordance with Council's Standard crossing and footpath specifications and AUS-SPEC#2-"Roadworks Specifications", at no cost to Council and before the issue of an Occupation Certificate.

The applicant shall provide security, in a manner satisfactory to Council for the proper maintenance of the public domain works in an amount of $1,500.00 for a period of twelve (12) months from the date of completion of the public domain works as surety for the proper maintenance of these works.

(17) Dilapidation report – OC

A second Dilapidation Report addressing the public infrastructure identified in "Dilapidation – minor", including a photographic survey and structural condition, must be submitted after the completion of works. A copy of this Dilapidation Report must be lodged with Council and the Principal Certifying Authority before to the issue of an Occupation Certificate.

Any damage identified in the Dilapidation Report must be fully rectified by the applicant or owner at no cost to Council before to the issue of an Occupation Certificate.

(18) Public domain – Council signoff

Prior to issue of the Occupation Certificate the person acting on this consent shall obtain from Council a compliance Certificate(s) stating that all Road, Footpath and Public Domain Works on Council property required to be undertaken as a result of this development have been completed satisfactorily and in accordance with Council approved plans and specifications.

(19) Positive Covenant

With regard to the Flood Wall, a Positive Covenant shall be placed on the Title in favour of Council to ensure maintenance of the wall, before the issue of the Occupation Certificate.

All instruments under Section 88B of the Conveyancing Act used to create positive covenants, easements or right-of-ways shall include the condition that such easements or right-of-ways may not be varied, modified or released without the prior approval of Council.

(20) Creation of Easement

Before the issue of the Occupation Certificate (interim or final) the required stormwater easement must be registered in accordance with Section 88B of the Conveyancing Act.

H Conditions that are ongoing requirements of development consents

(1) Acoustic impacts – compliance

The proposed use of the premises and the operation of all plant and equipment shall not give rise to an 'offensive noise' as defined in the Protection of the Environment Operations Act 1997 and Regulations.

In this regard, the operation of the premises and plant and equipment shall not give rise to a sound pressure level at any affected premises that exceeds the background $L_{A90,\ 15min}$ noise level, measured in the absence of the noise source/s under consideration by 5dB(A). The source noise level shall be assess as an $L_{Aeq,\ 15min}$ and adjusted in accordance with the NSW Environment Protection Authority's Industrial Noise Policy and Environmental Noise Control Manual (sleep disturbance).

(2) Acoustic – Outdoor areas

There is to be no entertainment in the form of amplified music on any part of the outdoor area at any time.

The operating hours of all outdoor communal areas is restricted to 9:00am – 10:00pm Monday to Sunday.

(3) Boarding house registration & inspection

The boarding house is required to be registered on a register administered by NSW Fair Trading within 28 days, where a proprietor takes over an existing, or begins operating a new, registrable boarding house.

Council will carry out initial (within the first 12 months) and on-going inspections in accordance with the Boarding Houses Act 2012 subject to payment of inspection fees as detailed in Council's Fees and Charges schedule.

The boarding house must be operated in accordance with the Boarding Houses Act 2012.

(4) Health Impacts

The use of the premises shall not give rise to an environmental health nuisance to the adjoining or nearby premises and environment. There are to be no emissions or discharges from the premises, which will give rise to a public nuisance or result in an offence under the Protection of the Environment Operations Act 1997 and Regulations. The use of the premises and the operation of plant and equipment shall not give rise to the transmission of a vibration nuisance or damage other premises.

(5) Waste – Commercial collection time

To ensure minimal impacts on surrounding properties commercial waste and recyclable material generated by the premises must not be collected between the hours 9pm and 8am.

(6) Neighbourhood Amenity

No injury must be caused to the amenity of the neighbourhood by the emission of noise, smoke, smell, vibration, gases, vapours, odours, dust, particular matter, or other impurities which are a nuisance or injurious or dangerous or prejudicial to health, the exposure to view of any unsightly matter or otherwise.

The use of the boarding house, including any plant and equipment, must not give rise to:

a) transmission of unacceptable vibration to any place of different occupancy;

b) a sound pressure level at any affected premises that exceeds the background (LA90) noise level in the absence of the noise under consideration by more than 5dB(A). The source noise level shall be assessed as an LAeq,15min and adjusted in accordance with Environment Protection Authority guidelines for tonality, frequency weighting, impulsive characteristics, fluctuations and temporal content as described in the NSW Environment Protection Authority's Environmental Noise Control Manual and Industrial Noise Policy 2000 and The Protection of the Environment Operations Act 1997 (NSW).

(7) Washing and Drying Facilities

A minimum of two (2) washing machines and two (2) dryers must be available for resident use at all times, unless each room is provided with individual washing and drying facilities.

I Advisory Notes

(1) Modifications to your consent - prior approval required

Works or activities other than those authorised by the approval including changes to building configuration or use will require the submission and approval of an application to modify the consent under Section 4.55 of the *Environmental Planning & Assessment Act 1979*. You are advised to contact Council immediately if you wish to alter your approved plans or if you cannot comply with other requirements of your consent to confirm whether a Section 4.55 modification is required.

Warning: There are substantial penalties prescribed under the *Environmental Planning and Assessment Act 1979* for breaches involving unauthorised works or activities.

(2) Occupational health and safety

All site works must comply with the occupational health and safety requirements of the SafeWork NSW.

(3) Tree preservation

Where tree removal or work has not been approved by this Development Consent, the developer is notified that a general Tree Preservation Order applies to all trees (with the exception of certain species) in the Municipality of Ashfield with a height greater than five (5) metres. This order prohibits the ringbarking, cutting down, topping, lopping*, pruning, transplanting, injuring or wilful destruction of such trees except with the prior approval of the Council. Written consent from Council for such tree works must be in the form of a "Tree Preservation Order Permit for Pruning or Removal of Protected Trees" to be obtained from Council.

* Lopping may be carried out without consent only to maintain a minimum clearance of 500mm from power lines, pruning to remove dead wood/branches and minor pruning of branches overhanging buildings to a height of 2 metres only with the agreement of the owner of the tree. Contact Council's One Stop Shop - telephone 9716 1800, for details of the Tree Preservation Order.

(4) Relocation of stormwater drainage

Council is not responsible for the cost of relocating Council's stormwater drainage pipes through the subject property.

Reason for the imposition of conditions

Unrestricted consent would be likely to cause injury:

a) to the amenity of the neighbourhood
b) to the heritage significance of the area
c) to the heritage significance of the property
d) to the amenity of the neighbourhood due to the emission of noise
e) to the amenity of the neighbourhood due to the creation of a traffic hazard

and further, would not be in the public interest.

Compliance with Building Code of Australia

(1) All building work (other than work relating to the erection of a temporary building) must be carried out in accordance with the requirements of the Building Code of Australia (as in force on the date the application for the relevant construction certificate or complying development certificate was made).
(2) This clause does not apply to the extent to which an exemption is in force under clause 187 or 188 of the Environmental Planning and Assessment Regulation 2000, subject to the terms of any condition or requirement referred to in clause 187 or 188.

NOTES

(i) This approval does not relieve an applicant of the obligation to obtain any other approval required under Section 68 of the Local Government Act, 1993 and Ordinances or Section 4.12 of the Environmental Planning & Assessment Act, 1979 or any other Act or Regulation.

(ii) Further approval(s) – see above, may be required in addition to this development consent. Plans and specifications submitted for building works must comply with the Building Code of Australia, any relevant condition of development consent and/or other code or requirement of Council at the time of approval.

Ask Council if you are unsure of what procedures you need to follow.

SECTIONS 8.2, 8.7 AND 4.53 OF THE ENVIRONMENTAL PLANNING & ASSESSMENT ACT, 1979

You are advised that:

- Under the provisions of Section 8.2 of the Environmental Planning and Assessment Act, 1979, an applicant may request Council to review a determination of the applicant's development application, other than an application for designated development. Any request for a review must be made within six (6) months of the date on which the applicant received notice, given in accordance with the regulations, of the determination of the application and be accompanied by the fee prescribed in Section 257 of the Regulations.

- If you are dissatisfied with this decision, Section 8.7 of the Environmental Planning and Assessment Act, 1979, gives you the right to appeal to the Land and Environment Court within six (6) months after the date on which you receive this notice.

- Under the provisions of Section 4.53 of the Environmental Planning and Assessment Act, 1979, unless the development, which is the subject of this consent, is commenced within five (5) years from the date of determination, the consent will lapse.

mecone

20 September 2019

Conor Wilson
Senior Planner
Inner West Council
By email: conor.wilson@innerwest.nsw.gov.au

Dear Conor,

Re: Response to Sydney City East Planning Panel deferral for 74-75 Carlton Crescent Summer Hill

This letter provides a response to the deferral by the Sydney City East Planning Panel on 5 September 2019 in relation to the Development Application (DA) over land at 74-75 Carlton Crescent, Summer Hill (DA 2018.220).

The Panel deferred the matter, primarily so that the applicant could work with Council to provide an agreed solution to flooding related to the site – and in particular, a resolution to Clause 6.2 of the Ashfield LEP 2013.

In addition, the Panel made a number of other comments and questions seeking additional clarification relating to:

1. Preparation of amended drawings including a flood wall to PMF with appropriate setback from site boundary to enable landscaping **(Appendix 1)**;
2. Indicative landscape plan showing how landscaping could be provided towards the north of the site in front of the wall **(Appendix 1)**;
3. Amended Stormwater and Flooding Report and Flood Response Management Plan showing the protection from the PMF, including measures that could be implemented should the flood gate fail **(Appendix 2)**;
4. Additional measures on top of the flood gate to outline how protections would occur should flood gate fail and other examples of flood gates and their operation in Sydney **(Appendix 2);**
5. Additional information in an amended Green Travel Plan including confirmation students are not permitted residential permits **(Appendix 3);**
6. Preparation of a response to the Councillor motion correspondence date 27 August 2019; and
7. Confirmation that the building will include a full sprinkler system **(Appendix 4)**.

Item 6 is addressed within the content of the subject letter, with all other items addressed in Appendices 1 – 4.

In addition, we are requesting that Council also consider that the deferred commencement condition requiring the registration of an easement across adjoining land be removed, as the proposed development includes alterations to the proposed Concept Stormwater Management Plan that ensures all discharge will be towards the western boundary, which

Suite 1204B, Level 12, 179 Elizabeth St, Sydney NSW 2000 | **T:** 02 8667 8668 | **F:** 02 8079 6656
E: info@mecone.com.au | **W:** mecone.com.au

contains an existing connection to Council's stormwater network. The proposed Concept Stormwater Management Plan outlines that the stormwater runoff volume and peak flow rates for all stormwater events over the range from 5 to 100 year ARI events is less than the pre-development site – therefore the proposed development will result in an improvement and reduction in the stormwater currently discharged from the site and does not require any proposed stormwater to be conveyed across adjoining private property. Therefore, there is no longer a need for an easement or deferred commencement. The Concept Stormwater Management Plan is provided within **Appendix 2.**

Item 7 – Response to Councillor Motion dated 27 August 2019

The Development Application was presented to Council on 3 September 2019 where the Council passed a motion requesting that the application be refused for a number of reasons. Each of the reasons outlined and a response to the Councillors' concerns is outlined in Table 1 below.

Table 1 – Response to Council Resolution

Council Issue	Response
The proposal does not satisfy the conditions of SEPP ARH Clause 29(2)(e), which requires 0.5 parking spaces for each room.	Clause 29 of the SEPP ARH relates to "Standards that cannot be used to refuse consent", not a condition that must be complied with, or requires a Clause 4.6 variation if variation is sought. Rather, this provision simply requires that a consent authority cannot refuse an application if the development complies with the control. Compliance with this provision is considered unnecessary in this instance for the reasons outlined below and in the existing DA documentation. The proposed development is not for a generic boarding house but is for a specialised student accommodation development. Council has proposed a condition that includes a restriction of the use of the site to be registered on title, which will restrict the use of the site for student accommodation purposes in perpetuity. Considering the specialised use of the site, the Development Application has been supported by detailed evidence of other existing student accommodation facilities run by Iglu, that demonstrates there is no demand for private vehicle parking. The Green Travel Plan in **Appendix 3** outlines that of the 3,000+ beds operated as student accommodation by Iglu – there is no private parking provided at any of its facilities. Iglu has not received any complaints from students or surrounding users related to the demand for on-site car parking spaces for any of their existing sites. The Green Travel Plan demonstrates Iglu's philosophy to encourage staff and students to use sustainable modes of transport (public transport, cycling and walking), with the overall objective to influence the travel behavior of the site prior to being occupied. The site has been chosen due to the suitable location to public transport, surrounding amenity and commercial activity. For further details see the Green Travel Plan in **Appendix 3**. This philosophy aligns with Council's current approach to reduce the impact of private vehicle transport. The Vision of Council's draft Integrated Transport Strategy, "Going Places" involves; *Growing the number of Inner West residents, workers and visitors that prefer to walk, cycle and use public transport because it is safe convenient, enjoyable and healthy.*

Table 1 – Response to Council Resolution	
Council Issue	Response
	The proposed development is the physical realisation of this Vision and the first Priority of the Strategy, which requires the integration of land use and transport planning. The subject site has been specifically chosen due to its accessibility to alternative forms of transport as well as the facilities offered by the Summer Hill town centre and surrounding open space. Students that typically utilise student accommodation facilities are international or interstate and do not own a vehicle. Providing car parking spaces in the proposed facility would encourage car use for students who do not own or need to own a vehicle and would therefore directly conflict with the direction of Council to reduce the impact of private vehicle ownership.
The proposal does not satisfy the Inner West Comprehensive DCP, which requires a minimum of one parking space per staff member.	The Inner West Comprehensive DCP outlines that in the instance of boarding houses, 1 parking space is provided per "**resident** employee" (emphasis added). The proposal includes 24-hour staffing of the facility; however no resident employee is proposed. On account there is no resident employee, the proposal is not inconsistent with the relevant control in the DCP in relation to resident employees. Furthermore, the Comprehensive DCP outlines that Council may support variations to the parking requirements, where it is suitably justified. Part of this justification can be provided through provision of a "Workplace Travel Plan", which includes a package of initiatives aimed at reducing car-based travel. The Green Travel Plan has the same function as a Workplace Travel Plan and provides a range of initiatives aimed at reducing car-based travel. The Green Travel Plan aims to influence travel behaviors of both staff and students. This is consistent with the purpose of the Chapter A, Part 8 of the Comprehensive Inner West DCP 2016, which includes; - *To reduce the environmental impact of on-site surface car parking, including through appropriate stormwater treatment and landscaping.* - *To encourage sustainable transport such as bicycles, motor cycles and walking.* - *To be flexible in the approach provided the purpose of this part is met.* The proposed development has been well considered and as demonstrated above and attached Green Travel Plan, does not conflict with the controls provided in the Comprehensive DCP.
The proposal does not satisfy the BCC and NCC codes for disabled spaces for a Class 3 development, which requires at least one car space.	The proposed development does not include parking for any persons, abled or disabled. This approach has been supported and approved for all of Iglu's facilities. Iglu's BCA and Access consultants has reinforced that no disabled parking is required where no parking is provided on-site. This approach is also utilised where maximum parking controls are applied and no parking is proposed – for example within many sites in the City of Sydney LGA.
The proposal does not satisfy the following parts of the	In recognition of the concerns of Council and the Panel in relation to the proposal's ability to address the requirements presented in

Table 1 – Response to Council Resolution	
Council Issue	Response
ALEP2013 pursuant to Section 4.15(1)(a)(iii) of the Environmental Planning and Assessment Act 1979 – Clause 6.2 Flood Planning	Clause 6.2(3) of the ALEP 2013, the Applicant has provided physical amendments to the proposal that will ensure there is no unreasonable risk to life from flood, including any PMF event. The physical changes have included the development of a physical barrier up to the height of the PMF that will aesthetically integrate with the design of the existing proposal. Furthermore, internal levels have been slightly amended to prevent flood ingress from flood events. To ensure that the proposed flood wall does not restrict movement through the rear of the site and to ensure the design can still actively respond to the rear of the laneway, a flood gate has been proposed for a small section. **The flood gate is not required to protect the site from 1:100 Year ARI event, but will be activated in a PMF event**. This flood gate is only required for a narrow passageway from the internal courtyard to the laneway at the rear of the site. The proposed flood gate design relies on buoyancy only and has no mechanical reliant aspects, which significantly reduces any risk of fail. However, for absolute protection relating to managing risk to life from flood, additional fail safes are also proposed. For this reason, the Amended Stormwater Repot in **Appendix 2** has also included the provision of Demountable Flood Barrier Panels that will be inserted on the courtyard side of the flood gate in the event that external flood waters reach the 1:100 Year ARI event. The Demountable Flood Barriers will now impact the function of the flood gate. The Flood Response Management Plan in **Appendix 2** details that in the event that water levels reach the 1:100 Year ARI event (as observed by Staff and alerted by an automatic alarm system), staff members are to insert the panels into the tracks located behind the flood gate and lock them in place. Then evacuation of the lower levels to the upper levels is to occur in accordance with the Flood Response Management Plan. The Amended Stormwater Report outlines specific instances where this style of flood gate has been approved and implemented across LGAs in NSW including (but not limited to); - City of Sydney; - Burwood; - Waverley; - Georges River; - Central Coast; - Parramatta; - Blacktown; - Ryde; - Newcastle; - Northern Beaches; and, - Willoughby

Table 1 – Response to Council Resolution	
Council Issue	Response
	The amendments to the scheme have therefore demonstrated that the proposal provides measures that protect the future occupants and surrounding development from unreasonable impact from flooding in accordance with Clause 6.2 of the ALEP 2013.
The application has not demonstrated that the proposal is suitable for the site in its current form pursuant to Section 4.15(1)(c) of the Environmental Planning and Assessment Act 1979, specifically having regard to the flooding constraints and risks which apply to the land.	As demonstrated above, the proposal has been amended to ensure that no unreasonable flooding impact will result from the proposed development. Not only does the proposal now provide physical design solutions to defend from flooding ingress at PMF level, the proposal is also supported by an updated Flood Response Management Plan (**Appendix 2**). The Flood Response Management Plan complements the physical design response to the flood constraints of the land by providing operational response to the risk of flooding. The key measures outlined in the Plan show that the development can provides an operational response that includes: • On site managers will be present 24/7, with a minimum of 2 staff on duty at any given time. Staff are to facilitate the maintenance of monitoring and mitigation equipment, educate occupants on risks and evacuation procedures, administer test evacuations, monitor flood levels in major events and coordinate evacuation of lower levels to upper storeys (above PMF) when flood levels reach the 1:100 Year ARI event (noting that all levels of the accommodation are at or above the FPL which is 0.5m above the 1:100 Year ARI event). Ensuring that evacuation occurs at the 1:100 Year ARI means that evacuation will occur well before the PMF levels are reached as the 1:100 year ARI will always occur before the PMF. • Installation of a flood warning system to all lower level rooms, which is triggered by a sensor at the southern property boundary. The alarm will sound once the water level at the trigger location reaches 300mm depth, commensurate with the 1:100 Year ARI event (which is 0.5m below the FPL and 1.5m lower than the PMF). • At the confirmation of 1:100 Year ARI event, staff and students will be further alerted by an automated emergency announcement over the PA system (the same approach that is deemed suitable for warning occupants of a fire) for evacuation of lower ground level. • Demountable flood barriers are to be inserted behind the flood gate and clamped into place. The demountable flood barriers will not impact the operation of the flood gate but will provide additional barrier/treatment to the PMF event. • The staff immediately commence door to door entry to each accommodation at the lower ground level and evacuation to the level above and confirm that all persons at the lower ground level have been evacuated to a level above the PMF. Evacuation will remain in place for

Table 1 – Response to Council Resolution	
Council Issue	Response
	approximately 2 hours or until such time the ponding depth has receded. • Despite all DDA rooms being located on upper levels above the PMF, the Flood Evacuation Management Plan requires a Personal Emergency Evacuation Plan (PEEP) to be prepared for all persons with a disability to ensure the safety of each student in the case of an evacuation. Accordingly, the combination of Flood Response Management Plan and the physical design responses show that the proposal meets the requirements of the ALEP 2013 and the ADCP 2016, in that it provides design and operational solutions to ameliorate the risk from all possible flood events on future occupants and on surrounding land uses. The proposal has therefore comprehensively addressed the flood constraints of the land and is considered suitable for the site in accordance with Section 4.15(1)(c) of the *Environmental Planning and Assessment Act 1979*.
Council's submission also requests that the following matter be dealt with in the determination: - Cross ventilation	The proposed development is for a Student Accommodation, which has no requirement for natural cross ventilation (the ADG does not apply to Boarding Houses). Despite this, Iglu has seen the advantage of maximizing the number of rooms that are single loaded and providing louvres and fan lights to allow the rooms to be naturally cross ventilated if desired by the occupants.
- Natural drying of washing	Despite no formal natural drying area being provided, it should be noted that extensive sustainability measures have been proposed as part of the development. This includes 100kW Solar PV system with integrated battery storage that despite the use of the laundry will reduce the C02 Greenhouse gas emission by 138 tonnes per annum.
- Flood/WSUD	Flooding and stormwater has been addressed elsewhere in this letter with detail provided in **Appendix 2**. However it should also be noted that the proposed development will increase the pervious and deep soil planting area of the site, decreasing the stormwater run-off generated.
- Bicycle path access and signage between storage and cycle route and station	The Green Travel Plan in **Appendix 3** details the cycling infrastructure that surrounds the site – including link from the rear of the site to various on-road cycle paths, off road shared paths (GreenWay) and the Summer Hill Station.
- Bicycle charging facilities	The applicant is happy to explore bicycle charging facilities in the bicycle storage room during the detailed design stage – should Council have additional detail on this proposed system.
- Food waste management plan	The operation of the student accommodation does not include the provision of meals by IGLU.

Attachment 2

Thank you for the opportunity to provide additional information to address flooding and other matters raised by Council officers and the Panel. Please do not hesitate to contact me on 8667 8668 or kbartlett@mecone.com.au to discuss further.

Yours sincerely,

Kate Bartlett

Director

mecone

Appendix 1 – Amended Plans and Landscaping

mecone

IGLU SUMMER HILL

FLOOD PROTECTION WALL STUDY
FOR COUNCIL REVIEW AND FEEDBACK
SEPTEMBER 2019

BATESSMART 360

PMF PROTECTION WALL
3D VIEW

LOWER GROUND PLAN

REVISED FOR FLOOD PROTECTION STUDY

DEVELOPMENT APPLICATION	NOT FOR CONSTRUCTION

Revision summary:
- Wall Flood Barrier along the property boundary and Bicycle Storage at RL. 21.90
- Finish Floor Level Courtyard at RL 21.90
- Revised Bicycle Storage Layout for access and connection.

E	07.08.19	For Development Application	EN	HS
D	08.07.19	For Development Application	EN	HS
C	24.06.19	For Development Application	JC	HS
B	17.05.19	For Development Application	JC	WG
A	07.12.18	For Development Application	JC	WG

Revision Date Description Initial Checked

74 Carlton Crescent
Summer Hill

Lower Ground Plan

Scale	1:200@A1 1:400@A3
Drawn	Checked
Project No.	S12235
Status	FOR INFORMATION
Plot Date	18/9/2019 6:36:04 PM
Plot File	
Drawing No.	A03.100 - LOWER GROUND PLAN_PMF UPDATE

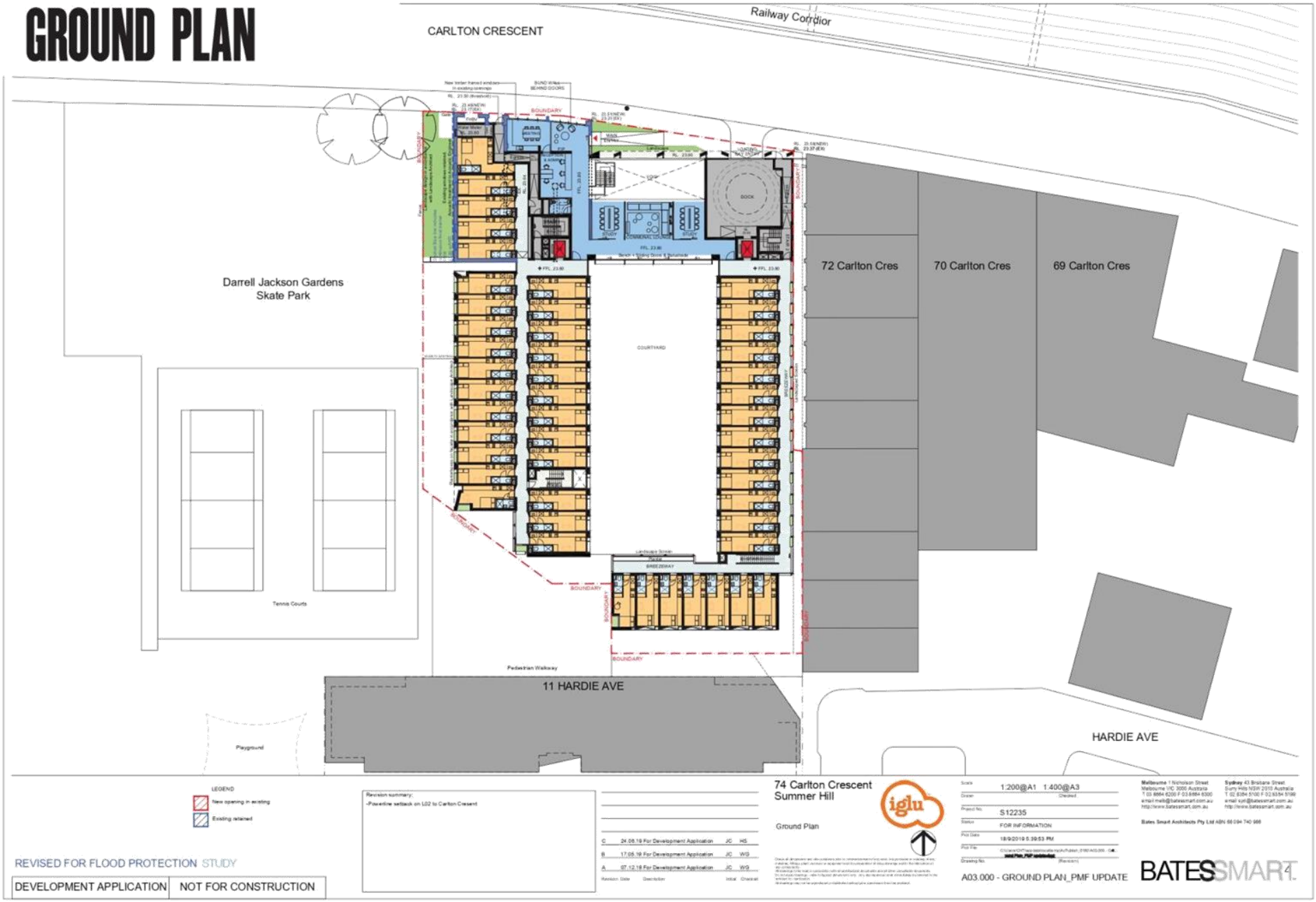
Melbourne 1 Nicholson Street Melbourne VIC 3000 Australia T 03 8664 6200 F 03 8664 6300 e-mail melb@batessmart.com.au http://www.batessmart.com.au

Sydney 43 Brisbane Street Surry Hills NSW 2010 Australia T 02 8354 5100 F 02 8354 5199 e-mail syd@batessmart.com.au http://www.batessmart.com.au

Bates Smart Architects Pty Ltd ABN 66 094 740 986

BATESSMART

GROUND PLAN

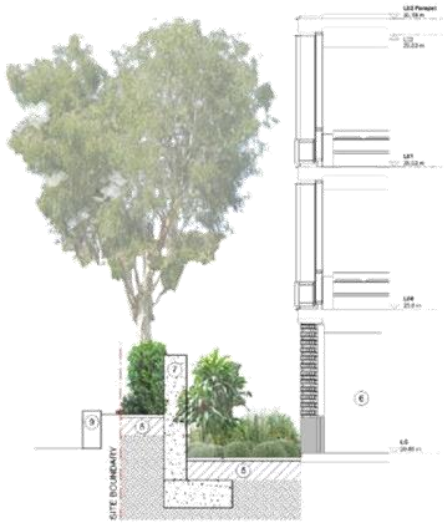

CARLTON CRESCENT
Railway Corridor
Darrell Jackson Gardens
Skate Park
72 Carlton Cres
70 Carlton Cres
69 Carlton Cres
COURTYARD
BREEZEWAY
BOUNDARY
Tennis Courts
Pedestrian Walkway
11 HARDIE AVE
HARDIE AVE
Playground
LEGEND
New opening in existing
Existing retained
Revision summary:
-Powerline setback on L02 to Carlton Crescent
C 24.08.19 For Development Application JC HS
B 17.05.19 For Development Application JC WG
A 07.12.18 For Development Application JC WG
74 Carlton Crescent
Summer Hill
Ground Plan
iglu
1:200@A1 1:400@A3
S12235
FOR INFORMATION
18/9/2019 5:39:53 PM
A03.000 - GROUND PLAN_PMF UPDATE
BATESSMART
REVISED FOR FLOOD PROTECTION STUDY
DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

LANDSCAPE DESIGN

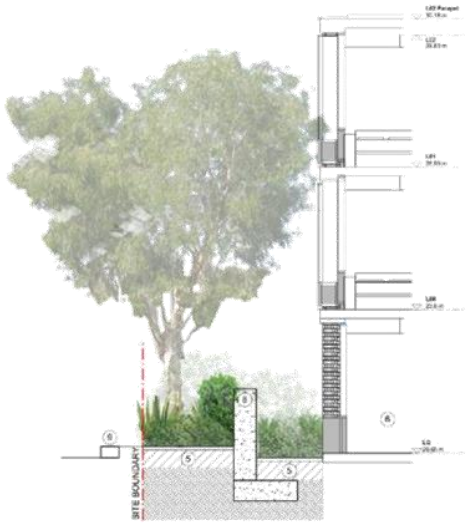
LANDSCAPE PLAN

KEY

1. Heritage Building
2. New Pier and Capping Beam
3. Existing Brick Facade
4. Sunken Planter to Protect Foundations from Moist
5. Garden Bed
6. IGLU Building
7. Flood Wall (TOW = 22.80)
8. Flood Wall (TOW = 22.06)
9. Existing Wall to be Retained

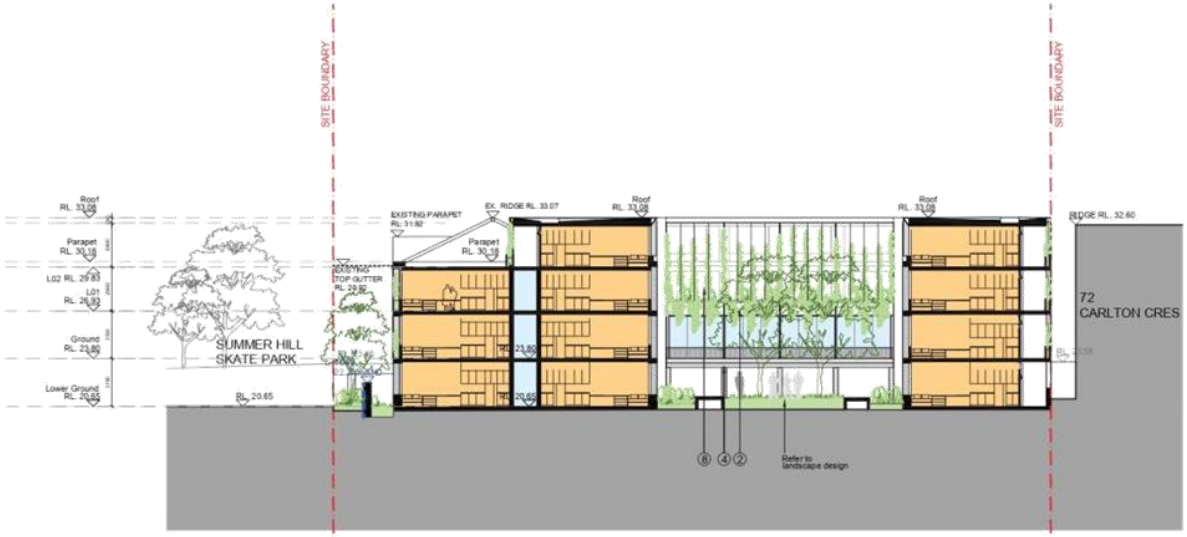


2 Section 2
Scale 1:50 @ A1

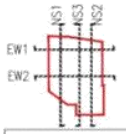


3 Section 3
Scale 1:50 @ A1

EW SECTION



REVISED FOR FLOOD PROTECTION STUDY



Material Key
1. Performance vision glass/ Metal window reveal/ Metal louvres
2. Metal planter box to landscape architect's detail
3. Slim profile brick
4. Off-form Concrete
5. Metal framed clear DGU vision glass
6. Metal Gate
7. Performance vision glass/Metal window reveal/ glass louvres
8. Metal frame and steel balustrade screen
9. Metal panel
10. Timber batten screen

DEVELOPMENT APPLICATION | NOT FOR CONSTRUCTION

Revision summary:
-Powerline setback on L02 to Carlton Crescent

Revision	Date	Description	Initial	Checked
C	24.06.19	For Development Application	JC	HS
B	17.05.19	For Development Application	JC	WG
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent
Summer Hill

EW Cross Section 01

iglu

Scale	1:150@A1 1:300@A3
Drawn	Checked
Project No.	S12235
Status	FOR INFORMATION
Plot Date	18/9/2019 5:42:35 PM
Plot File	
Drawing No.	[Revision]

A08.002 - EW CROSS SECTION 01

Melbourne 1 Nicholson Street Melbourne VIC 3000 Australia T 03 8664 6200 F 03 8664 6300 email melb@batessmart.com.au http://www.batessmart.com.au

Sydney 43 Brisbane Street Surry Hills NSW 2010 Australia T 02 8354 5100 F 02 8354 5199 email syd@batessmart.com.au http://www.batessmart.com.au

Bates Smart Architects Pty Ltd ABN 69 094 740 986

BATESSMART

PMF PROTECTION WALL
VIEW 02

PMF PROTECTION WALL
VIEW 03

Appendix 2 – Amended Stormwater Management Plan and Flood Response Plan

mecone

TTW Taylor Thomson Whitting

Amended Stormwater Report

Iglu Pty Limited / 19 September 2019

181975 CAAA

Taylor Thomson Whitting (NSW) Pty Ltd, Consulting Engineers | ABN 81 113 578 377
48 Chandos Street, St Leonards NSW 2065 | +612 9439 7288 | ttw.com.au

Structural
Civil
Traffic
Facade
Consulting
Engineers

Contents

1.0 Introduction

Taylor Thomson Whitting Pty. Ltd (TTW) has been commissioned to provide stormwater disposal and soil and erosion control measures to support the proposed Development Application for Iglu Summer Hill development. This report details the concept design for Development Application (DA) stage only.

This report outlines the proposed stormwater disposal requirements and the impact of this proposed development.

1.1 The Existing Site

The site is bounded by Carlton Crescent to the north, Darrell Jackson Gardens and Skate Park to the west, and commercial properties to the south and east. Refer to Figure 1 for site location.

The existing site is a two-storey brick and metal clad building with on-grade carpark to the rear of the property which is 100% impervious. The existing overflow path (shown in green arrows in Figure 1) is through the rear of the property flowing towards Hardie Avenue as shown in Figure 1.

Figure 1 Site Location (Source: SIX Maps)

The in-ground drainage is currently directed to the stormwater pit 'C' on the southwest corner of the site as shown in Figure 2. Outlet direction from pit 'C' is currently unknown and will requires further investigation during detailed design.

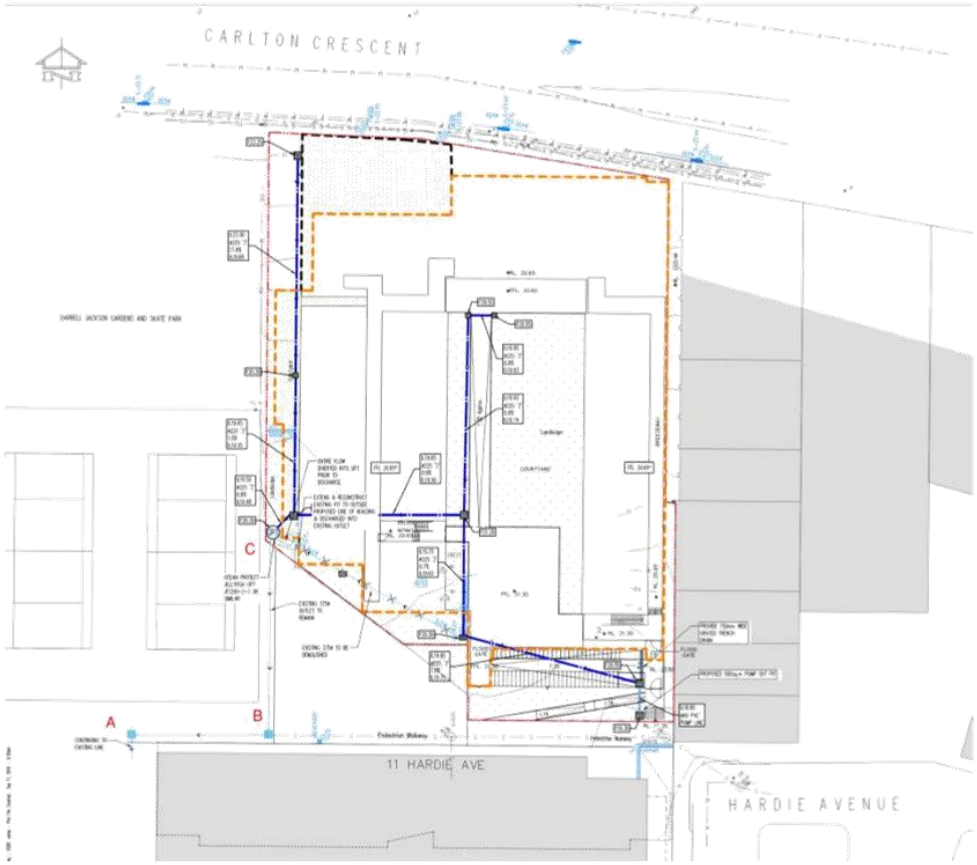


Figure 2 extract from C0110 issue P4

1.2 Relevant Documents

The following documents have been reviewed in preparing this document:

- Comprehensive Inner West DCP 2016
- Ashfield Local Environment Plan (LEP) 2013
- Ashfield Interim Development Assessment Policy 2013
- Urban Erosion and Sediment Control Handbook (2006)

2.0 Proposed Development

The proposed development will involve the following:

- Demolition of the existing 2 storey building.
- Construction of a new 4 storey student accommodation building.
- Landscape works.

The lower ground floor layout is shown in Figure 4, refer to the Architectural drawings for the proposed floor layouts for different levels. The revised lower ground floor has a Flood Wall set to the PMF level to prevent flood ingress into the courtyard for all probable flood events.

There is a proposed self-raising flood gate from the courtyard to the laneway to allow resident movement in non-PMF storm event times to provide resident access to the retail centre to the south.

The proposed civil engineering works include a proposed in-ground pit and pipe networks, site regrading and water quality measures.

Protection from the PMF event is the primary driver for the design change.

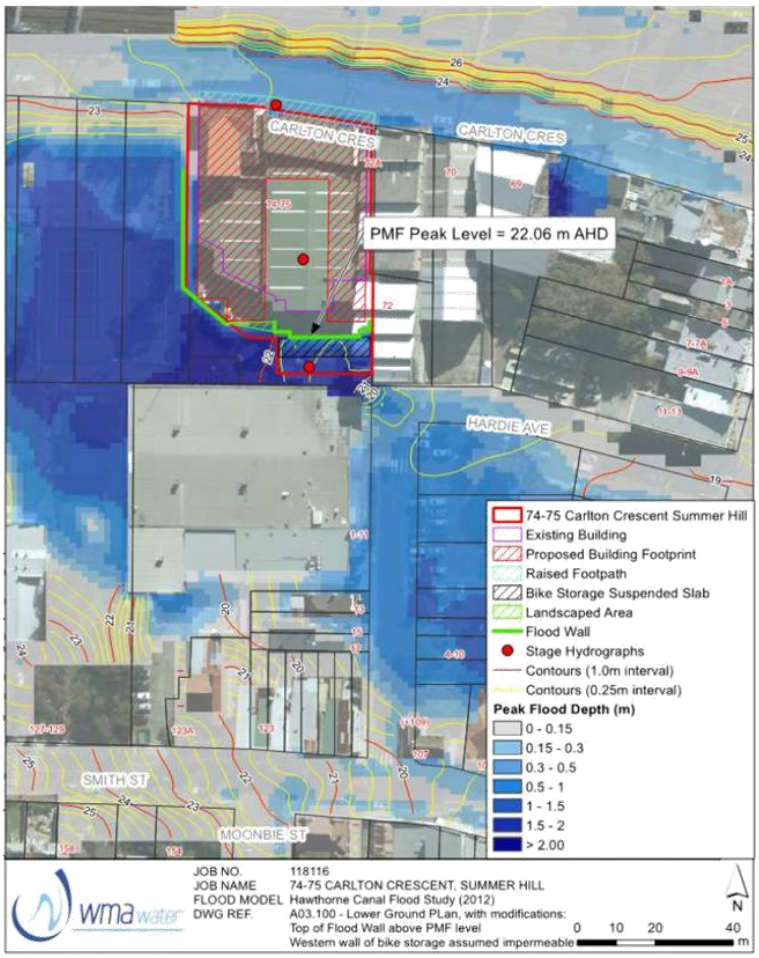


Figure 3 PMF extent with the flood wall

Figure 4 Lower Ground Floor Plan by Bates Smart dated 19 September 2019

PMF PROTECTION WALL
3D VIEW

Figure 5 PMF protection wall study by Bates Smart dated 19 September 2019

3.0 Flood Gate System

Flood Gate system proposed to be a self-raising system as supplied by the Flooding Solutions advisory Group

11 meter **SCFB** 1000

Solid and simple solution

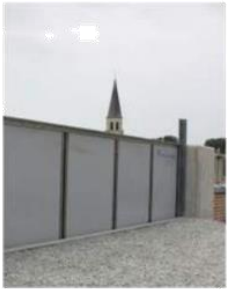
We are proud to introduce to you the HYFLO Self Closing Flood Barrier SCFB™, a unique effective flood defense system to protect people and property from inland waterway floods caused by heavy rainfall, gales or rapid melting snow. This system has been developed to provide optimal protection against extreme high water levels. The HYFLO Self Closing Flood Barriers SCFB™ can be built in the top of a dike or quay to protect inhabited as well as industrial or other strategic areas. The Barrier systems have already been built and installed in many countries around the globe.

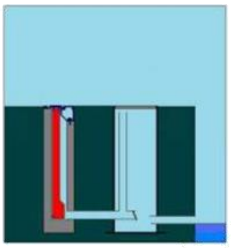
Key benefits

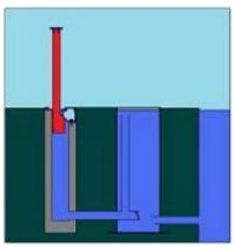
- **NO WARNING SYSTEM and WARNING TIME REQUIRED** - the Self Closing Flood Barrier SCFB™ rises instantly through the rising water level
- **NO MANPOWER REQUIRED** - the Self Closing Flood Barrier SCFB™ is not energy driven and operates without any human intervention
- **SHORT CLOSING TIME** - with a fast flood the barrier will close within a minute
- **NO STORAGE NEEDED** - in resting position the barrier is invisible and fully self protected
- **FULL PROTECTION** - to commercial and residential communities
- **MAINTENANCE FREE** - all applied elements represent the highest quality, with a unlimited time length
- **EASY TO TEST** - By filling up the pit the barrier is lifted automatically and ready for inspection
- **UNLIMITED LENGTHS** -The HYFLO system can be built at any required length: 1 m - 10 m - 100 m - 1000 m and more
- **EASY TO INSTALL**
- **THE BEST PRICE / PERFORMANCE COMPACTION**: without ongoing associated costs involving deployment, storage and maintenance.

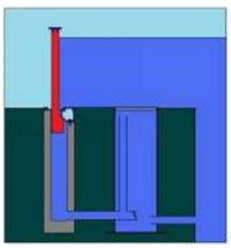
Flooding Solutions Advisory Group, Australia

Principle of the Self Closing Flood Barrier SCFB™









Following installation and in non-flood conditions, all operational parts of the barrier are invisibly concealed in the ground inside its basin.

When floodwater rises to within 10cm below flood level, the enclosed basin, which houses the floating wall, starts to fill up through an inlet pipe from the adjacent service pit. The flood wall floats and rises. When the basin is totally filled, the angled support block will ' lock the barrier into position making it watertight.

The floodwater can now continue to rise without flooding the protected area.

As the water subsides , the flood water in the basin is drained by drain pipes with one way check valves. As the water continues to drain from the basin, the flood wall returns to its resting position within the basin and the lid seals the barrier to prevent the barrier of waste and debris.

Innovative, effective and proven defence.

This award winning concept has been acclaimed as the world's most effective protection against floods. The Self Closing Flood Barriers SCFB™ have now become the leading flood defence device in its field. It has been in operational use around the globe since 1998 with a 100% success rate. The HYFLO barriers have already been operating more than 2.000 times in 14 years without worthy of mentioned maintenance.

Flooding Solutions Advisory Group, Australia

The locations these unit have been installed in NSW are as follows, TTW designed the Marketown system listed below

October 2018

Selected NSW Self Closing Flood Barrier locations

(most are completed, a few are council approved awaiting installation)

- South Sydney Leagues Club and adjacent properties, Redfern (5 barriers)
- 32 Ralph St, Alexandria (2 barriers)
- 46 – 52 Wentworth Ave Surry Hills, Sydney
- UTS Chau Chak building Ultimo, Sydney
- Darling Square, Sydney International Conference Entertainment & Exhibition Precinct (18 barriers in 3 new buildings)
- 84-92 Epsom Rd Zetland, Sydney
- 87 Bay St Glebe, Sydney
- Rugby Union Development Centre, Moore Park -2 barriers approved then designed out.
- 42 Meryla St, Burwood, Sydney
- 17 Beeson St Leichardt, Sydney
- 21 Bay St Double Bay, Sydney
- 128 Bellevue Hill Rd, Bellevue Hill, Sydney
- 134 Bellevue Hill Rd, Bellevue Hill, Sydney
- 4 Marine Parade Watsons Bay, Sydney (2 barriers)
- 1 Jacques Ave Bondi
- 10 Hall St Bondi (4 barriers)
- 11 Hall St Bondi (2 barriers)
- Lakeview apartments, Riverwood Sydney
- Royal Shores Apartment Complex, Ermington, Sydney (4 barriers)
- 21 Cowper St, Parramatta
- 1a Morton St, Parramatta
- The Ponds Shopping Centre, The Ponds
- West Ryde Community Centre, Ryde Sydney
- 1416 Pittwater Rd. Narrabeen (2 barriers)
- 1408 Pittwater Rd, Narrabeen
- Warringah Mall redevelopment, Brookvale (7 barriers)
- Macquarie Centre, Ryde

...../2

Flooding Solutions Advisory Group Pty Ltd | ABN 67 121748 347 | info@floodingsolutions.com.au
Sales & Administration: (+612) 9904 7099 | 203/283 Alfred St **North Sydney** NSW 2060
Design & Construction: (+612) 4474 4711 | 14 Page St **Moruya** NSW 2537

- Aldi Brookvale store renovation (2 barriers)
- Marketown Shopping Centre, Steel St Newcastle (2 barriers)
- Wyong and Belmont Police Stations (2 barriers)
- Drayton House Aged Care, Bellevue Hill, Sydney
- Parramatta Square, at tender, 18 x barriers, various blocks
- Dee Why Town Centre (2 barriers)
- 17 Carlotta Rd, Double Bay
- 11-13 Burwood Rd Burwood
- The Lennox, Parramatta (8 barriers)
- 8 Phillip Street, Parramatta (7 barriers)
- 105 Phillip St,Parramatta
- 636 New South Head Road, Rose Bay
- NAB Chatswood (2 barriers)
- Shell Cove Shopping Centre
- NSW Art Gallery

A secondary system to reduce perceived risk is offered in addition to the self-closing flood barrier which is demountable barriers which can be deployed manually.

To our knowledge the self-closing flood barrier will be sufficient and suitable for the risk, however the following is the additional treatment

FLOODCONTROL INTERNATIONAL

DEMOUNTABLE BARRIERS

Demountable barriers are engineered to provide similar levels of protection to permanent flood defences, but with the distinct advantage of being fully removable when not required. They comprise aluminium panels that are inserted into steel channels. Bespoke clamps compress specialist seals to create a reliable barrier against flood water.

These barriers can be supplied for virtually any configuration including arcs, closed rectangles or circles and straight runs of any length. The system can be used on slopes up to 20° and can be stepped for steeper gradients. Each system is load calculated based on application and the prevailing flood conditions and can be configured for flood depths up to 4m. A four-sided detail is available for openings that may become fully submerged.

To facilitate installation in new builds, we can supply preformed ground plates with integral anchors for the demountable supports. The systems can be also retrospectively fitted to suitable existing foundations in which case load certified, chemically fixed sleeve anchors are used to attach the demountable supports.

This leaves only stainless steel bolt blanks at each post location. Due to the strength of our beams, this can be at 3m spacing.

Purpose designed seals that resist silt clogging and reform even after prolonged compression, together with vandal resistant covers and lockable clamps, make these systems ideal for locations where semi-permanent installation is a requirement.

The modular design facilitates storage and transportation and the ergonomically positioned carrying handles enable all but the higher systems to be erected without the need for mechanical lifting equipment.

Fully removable flush-finish perimeter defences - flood depths up to 4m, ideal for wide area defences.

USES

- Single building apertures.
- Openings in flood walls.
- Stainless / aluminium system for marine environments.
- Fully removable perimeter defence to buildings.
- A 'usually stored' system for erection when flood warnings received.

BENEFITS

- Low cost system.
- Lightweight - sections allow safe lifting of 3m beams by one person for rapid deployment.
- Flexibility – can be configured to any geometry.
- High strength – single beams can span up to 3m unsupported. Spans up to 6.5m possible with optional back-braces.
- Choice of bottom seals - allow barriers to sit on existing non-porous surfaces.
- Completely removable - leaving a totally flat ground surface.
- Vandal resistant - covers and padlockable clamps available.
- Able to be powder coated to any RAL colour.
- Long life - using galvanized and aluminium components.

www.floodcontrolinternational.com.au

FLOODCONTROL INTERNATIONAL

DESIGN

SIZES

- Unsupported spans possible up to 3m.
- Maximum spans of up to 6.5m possible with back bracing.
- Standard maximum flood control height of 4m, using 300mm standard beams.
- Beam weights of 8kg/m allow safe single person lifting of 2.5m beams.

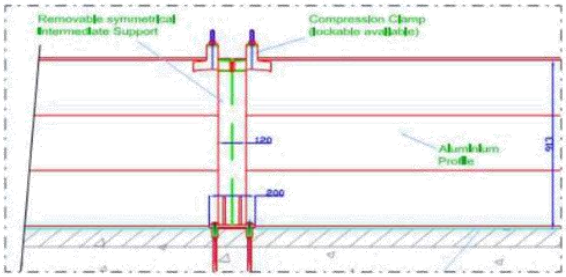
CONFIGURATIONS

- Any length or layout is achievable.
- Posts and beams can be tailored for any gradient.
- Posts can accommodate steps and changes in direction.

INSTALLATION

- End posts can be surface mounted or recess mounted. Architectural coverplates can be applied to match building finishes.
- Intermediate posts require RC beam foundation. This can be under final surfacing finish with drilled in stainless steel sockets, or with cast in baseplates.
- Systems can be retrospectively fitted to any suitable foundation.
- Every system is bespoke designed using CAD and drawings provided.

BESPOKE CAD DRAWINGS



www.floodcontrolinternational.com.au

4.0 Stormwater Disposal Design

4.1 On-site Detention (OSD)

Inner West Council's OSD requirements are to ensure that the post-development peak flows do not exceed the peak flow rate generated under the existing site condition for all stormwater events over the range from 5 to 100 year annual recurrence interval (ARI) storm events.

Existing site is 100% impervious while the proposed development decreases the site imperviousness by proposing 723 m^2 landscape area (25% of the site area). Refer to Appendix B for pre-development and post-development catchment plans.

The stormwater runoff volume and peak flow rates for all stormwater events over the range from 5 to 100 year ARI from proposed development is less than from pre-development site. A hydrological model has been created using DRAINS modelling software to compare the pre-development and post-development peak flows, results are outlined in Table 3.1. Note that this DRAINS model has been development using AR&R 1987 techniques in accordance with Council's DCP.

Table 4.1: Comparison of Pre and Post Development Flows

Storm Event (ARI)	Pre Development Flow (m^3/s)	Post Development Flow (m^3/s)
1 in 5 Year	0.133	0.125
1 in 10 Year	0.150	0.142
1 in 20 Year	0.174	0.166
1 in 50 Year	0.187	0.176
1 in 100 Year	0.207	0.197

As outlined in Table 3.1, post-development flow rates are less than the pre-development flow rates for all stormwater events from 5 to 100 year ARI without an OSD system.

The stormwater runoff is to be conveyed by the proposed inground drainage system and connected to the existing inground infrastructure on the south west corner of the site. Refer to the extract in figure 2 of this report and C0110 issue P4 in Appendix A for stormwater drainage layout.

4.2 Stormwater Quality

4.2.1 Water Quality Control Measures

The development will implement water quality treatment Gross Pollutant Trap (GPT) to remove gross pollutants, total suspended solids and phosphorus/nutrients effectively to maintain stormwater quality discharging from the site. Refer to Appendix A for the proposed stormwater management plan incorporating water quality treatment measure.

Notwithstanding the pollution removal rates, the principals of the proposed stormwater quality treatment measure are in accordance with Inner West Council stormwater treatment requirements.

4.2.2 Sediment and Erosion Control Plan

Sediment and erosion control measures are to be installed and maintained until construction is completed. The proposed sedimentation and erosion control measures is to temporarily manage runoff and ensure no detriment to the receiving environments.

Temporary strategies generally refer to the control of sediment erosion and water pollution during the construction phase. The primary risks occur when soil is excavated and exposed to the elements during construction works. It is at this stage that suspended solids and other construction activity associated pollutants can be washed into the receiving stormwater network and subsequently the downstream waterways.

The strategies that are implemented to prevent potential soil degradation and pollution of waterways include the adequate provision of sedimentation and erosion control measures.

The temporary controls that are proposed in the concept plans by TTW will limit the displacement of sediment caused by runoff from disturbed areas and are designed to remove sediment prior to discharging from site. Refer to Appendix A for sediment and erosion control plan.

5.0 Recommendation

We recommend that the stormwater concept plan as shown in Appendix A is implemented to comply with the intent of Inner West Council's relevant stormwater requirements.

Prepared by
TAYLOR THOMSON WHITTING (NSW) PTY LTD

NEMESIO BIASON
Associate Director

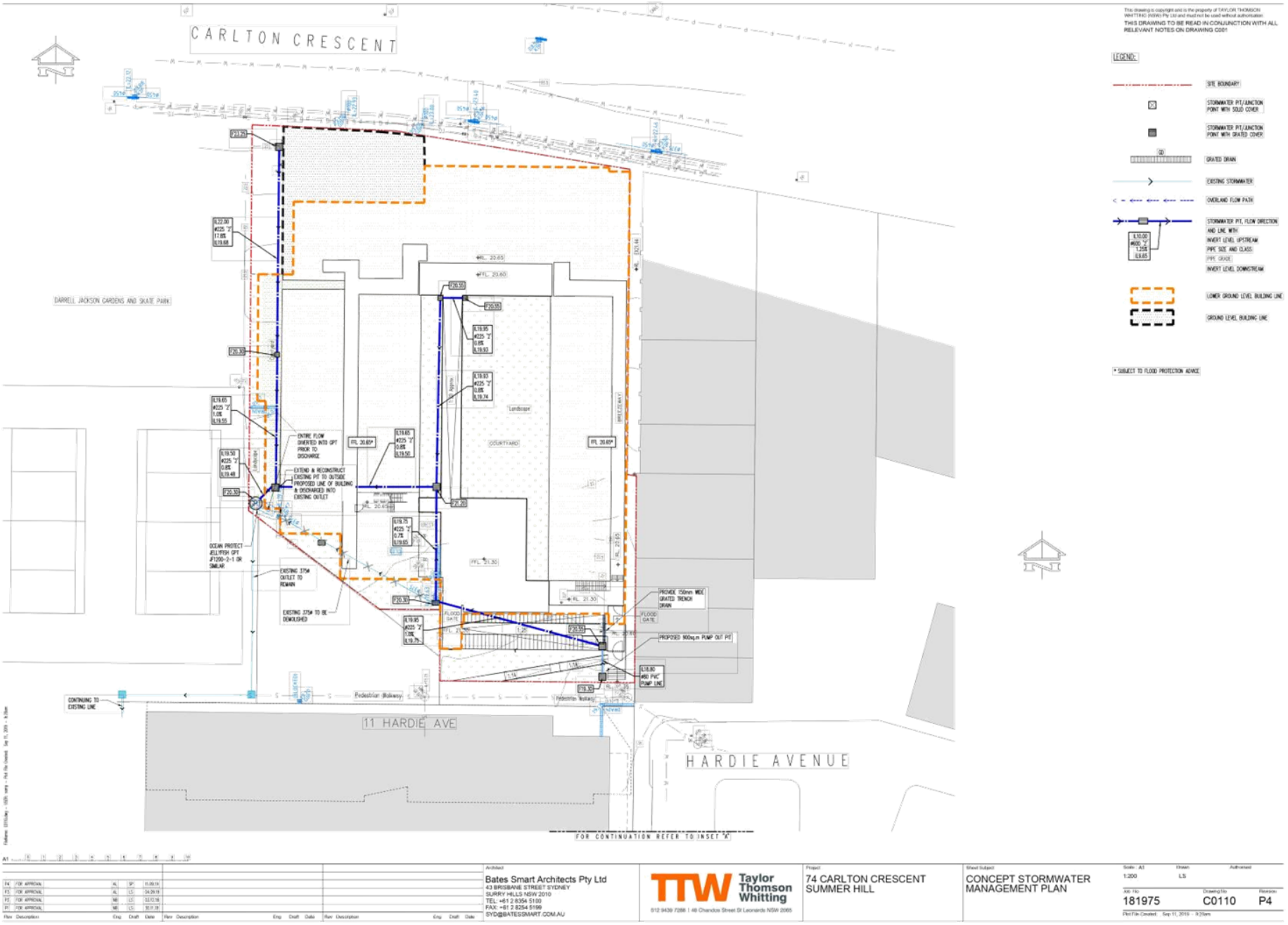
Reviewed & Authorised By
TAYLOR THOMSON WHITTING (NSW) PTY LTD

Stephen Brain
Technical Director

P:\2018\1819\181975\Reports\TTW\190919 summer hill iglu Civil Report for DA.docx

Appendix A

Stormwater Management Plan


CARLTON CRESCENT
DARRELL JACKSON GARDENS AND SKATE PARK
11 HARDIE AVE
HARDIE AVENUE
COURTYARD
Landscape
ENTIRE FLOW DIVERTED INTO GPT PRIOR TO DISCHARGE
EXTEND & RECONSTRUCT EXISTING PIT TO OUTSIDE PROPOSED LINE OF BUILDING & DISCHARGED INTO EXISTING OUTLET
OCEAN PROTECT JELLYFISH GPT JF1200-2-1 OR SIMILAR
EXISTING 375ø OUTLET TO REMAIN
EXISTING 375ø TO BE DEMOLISHED
CONTINUING TO EXISTING LINE
PROVIDE 150mm WIDE GRATED TRENCH DRAIN
PROPOSED 900sq.m PUMP OUT PIT
FLOOD GATE
Pedestrian Walkway
FOR CONTINUATION REFER TO INSET 'A'
THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING C001
LEGEND:
SITE BOUNDARY
STORMWATER PIT/JUNCTION POINT WITH SOLID COVER
STORMWATER PIT/JUNCTION POINT WITH GRATED COVER
GRATED DRAIN
EXISTING STORMWATER
OVERLAND FLOW PATH
STORMWATER PIT, FLOW DIRECTION AND LINE WITH
INVERT LEVEL UPSTREAM
PIPE SIZE AND CLASS
PIPE GRADE
INVERT LEVEL DOWNSTREAM
LOWER GROUND LEVEL BUILDING LINE
GROUND LEVEL BUILDING LINE
* SUBJECT TO FLOOD PROTECTION ADVICE
Bates Smart Architects Pty Ltd
43 BRISBANE STREET SYDNEY
SURRY HILLS NSW 2010
TEL: +61 2 8354 5100
FAX: +61 2 8254 5199
SYD@BATESSMART.COM.AU
Taylor Thomson Whitting
74 CARLTON CRESCENT
SUMMER HILL
CONCEPT STORMWATER MANAGEMENT PLAN
1:200
LS
181975
C0110
P4

Appendix B

Catchment Plan

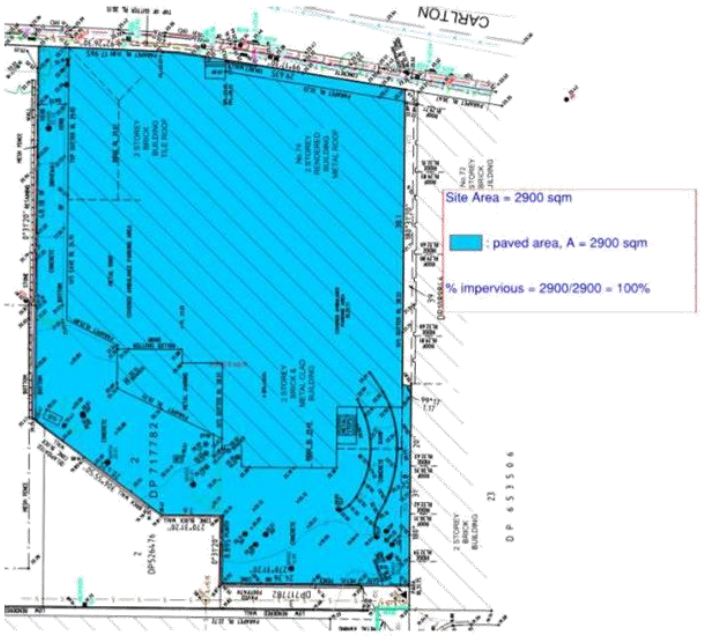


Figure 3 Catchment Plan Pre-development

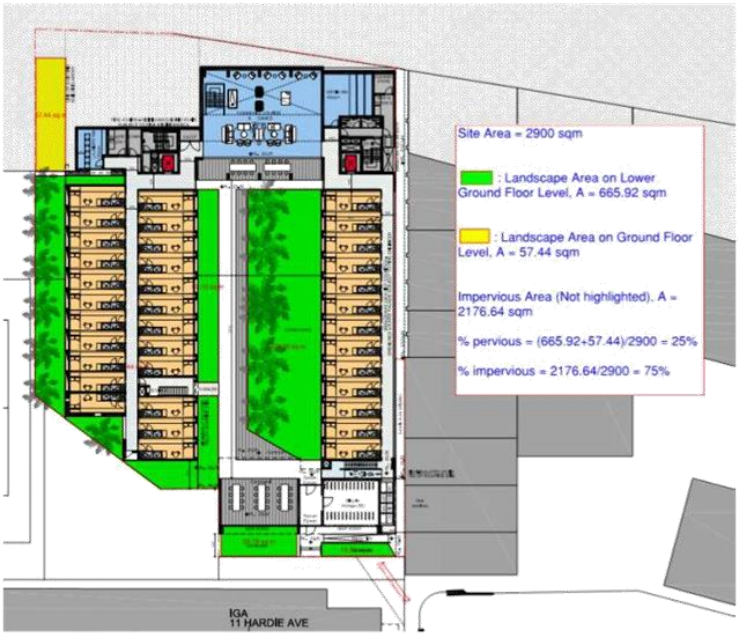


Figure 4 Catchment Plan Post-development

Taylor Thomson Whitting

Flood Response Management Plan

74-75 Carlton Crescent, Summer Hill

Prepared for IGLU 19/09/2019

181975

Structural
Civil
Traffic
Facade
Consulting Engineers

Taylor Thomson Whitting (NSW) Pty Ltd, Consulting Engineers | ABN 81 113 578 377
Level 3, 48 Chandos Street, St Leonards NSW 2065 | +612 9439 7288 | ttw.com.au

Contents

1.0 Introduction

Taylor Thomson Whitting (TTW) have prepared a Flood Response Management Plan (FRMP) for the proposed development at 74-75 Carlton Crescent ("Site"). The Site is located within the Hawthorne Canal catchment and lies between Carlton Crescent to the north, Summer Hill Skate Park to the west and Hardie Avenue to the south-east.

This FEMP has been prepared as part of a Development Application for the Site (REF No. DA 2018.220). As parts of the site lie below the probable maximum flood (PMF) level, TTW has prepared this site-specific Flood Response Management Plan to be developed and implemented as part of the proposal.

The purpose of this FRMP is to summarise the flood risks within the site, identify preparation measures required, and to provide an action plan with steps to be completed during a flood event.

The proposed development is the construction of a new 180 bed student accommodation facility by Australia's market-leading owner, developer and long-term operator of purpose-built off-campus student accommodation facilities, Iglu Pty Ltd (Iglu). Iglu currently has in operation over 3,400 beds across the major capital cities, Sydney, Melbourne and Brisbane. Iglu has a strong hospitality management platform and operates its buildings along hotel service lines.

Key features of the hospitality service include a 24/7 reception and student concierge service. The property will also have an alarm system, which will include 36 lower ground floor residences. The completed development at 74-75 Carlton Crescent will be managed by a 24/7 on-site hospitality team with up to 8 staff with a minimum of 2 staff on duty at any one time that will be trained and able to action the FRMP procedures. The staff on site will include:

- 1 x General Manager
- 2 x Customer Service Coordinators
- 4 x Resident Leaders
- 1 x Facilities Manager

2.0 Flood Behaviour

The building has been designed to ensure that there is protection for the development in the the Probable Maximum Flood (PMF) Storm Event due to the unusually quick flood water increase response for this site as out lined outlined in the Flood Impact Assessment prepared by WMA water (utilising Inner West Council's Hawthorne Canal Flood Model) as shown in the following figure.

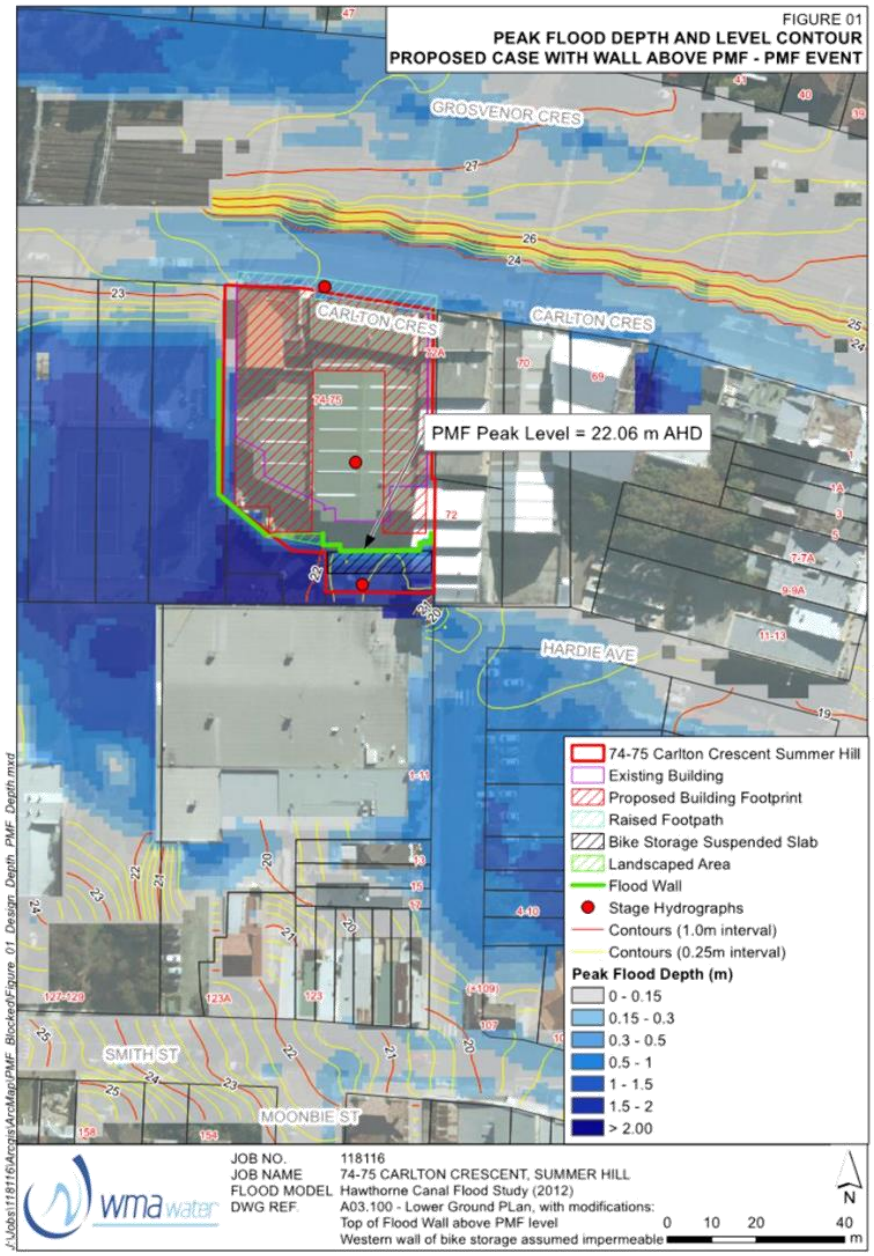


Figure 1: PMF Flood Level/Extent
Source: 74-75 Carlton Crescent Flood Impact Assessment, Prepared by WMAwater

The assessment confirms that for the PMF event, flooding could be caused by PMF in the lower level of the site including the courtyard. Accordingly, and consistent with the Council's Ashfield Development Control Plan (DCP) 2016 a site Flood Response Plan is to be prepared for utilisation in the case of a PMF event.

TTW recommends that evacuation in place is appropriate for the PMF flood condition and that lower ground residents* be moved to the upper floors of the development in the event that any flood event produces flows greater than 300mm deep in the southern pedestrian walkway. The 300mm flood depth is equivalent to the 1 in 100-year flood event level before the PMF flood level which is some 1.50m higher

There is a self-raising flood gate (upto 2.4m wide) between the courtyard and the southern lane connection. In the event of a 100year storm event the self-raising flood gate will extent to the PMF height through buoyant uplift from a grate in the lane way which will require 6 monthly certification to ensure its operational performance.

In the event of a 100year storm event a failsafe is also provided for, where there will be opportunity to place demountable flood barriers behind the flood gate. The demountable flood barriers will not impact the operation of the flood gate, but will provide an additional barrier/treatment to the PMF event. After the Incident Controller has confirmed that ponding is to 300mm depth in - the staff is also responsible to clamp in place demountable flood barriers behind the flood gate to the PMF height – and that the demountable flood barriers are located in close vicinity and easily accessible.

3.0 Preparation for Flood Response

3.1 Education

Resident awareness of flooding is a significant issue within the floodplain due to the infrequency of severe floods and the anticipated depths of these floods in a PMF event.

3.1.1 Staff

As part of the preparation for a flood event, the staff managing the 24/7 reception and student concierge service will be made aware of the flood risk and their obligation to evacuate the ground floor when flood flows in the southern lane exceed 300mm depth. Inductions will be held to educate staff on their role during a flood event. Staff to keep record of resident briefings.

3.1.2 Residents

Residents are to be made aware of the flood risk and the response requirement during a flood event which creates overland flow in excess of 300mm in the southern pedestrian connection. As part of this procedure, evacuation drills should be conducted regularly to ensure residents are aware of the procedures for sheltering on the ground floor level.

3.2 Evacuation Drills

It is recommended that evacuation drills be held at a minimum of twice yearly to ensure all residents and staff are aware of and familiar with their flood response actions, the sound of the alert and occupancy warning system, and the location of the assembly point.

All staff will be trained in the flood response procedures with mandatory drills to be conducted twice a year as per Iglu Summer Hill's Work Health Safety (WHS) calendar. Personal safety awareness sessions will be conducted at the start of each semester or three (3) time a year.

3.3 Flood Emergency Kit

A Flood Emergency Kit should be prepared prior to a flood event taking place and regularly checked to ensure that supplies within the kit are sufficient and in working condition. This check could occur after the evacuation drill takes place to provide a regular schedule. The Kit should include:

- Radio with spare batteries;
- Torch with spare batteries;
- First aid kit and other medicines;
- Candles and waterproof matches;
- Waterproof bags;
- A copy of the Site's Emergency Management Plan; and
- Emergency contact numbers.

This Emergency Kit should be stored in a waterproof container and is the responsibility of the First Aid Officer.

4.0 Coordination of Flood Response Warnings and Orders

IGLU Staff will decide when to issue Flood Response Warnings and Orders for the site.

A water level sensor device will be provided at the landscaped area south of the communal area as shown in the Figure 1.0. The flood water level sensor will be set up to provide early flood warning when flood water reaches 300mm deep in the in the southern pedestrian connection to provide early warning.

The early warning system installed will be connected to the 24/7 reception and student concierge service, Iglu's Incident Controller, to distribute these warnings to residents.

Th

The Incident Controller will initiate a flood response and occupant warning through a Public Address (PA) system including continuous bell that can alert residents and staff in the event of an emergency immediately followed by door to door entry** to each accommodation located at lower ground level.

Flood Response Plan	
Alarm Condition	Recommended actions
1) Local Councils or Bureau of Meteorology issues an alert, advice or warning.	Iglu's Incident Controller to observe ponding levels in Southern Laneway.
2) Flood Water level sensor sending alert High flooding level when depth of ponding in the Southern Laneway equals or exceeds 300mm.	Iglu's Incident Controller to confirm the ponding is to 300mm depth. If it is then place demountable flood barriers behind the flood gate. The demountable flood barriers will not impact the operation of the flood gate, but will provide an additional barrier/treatment to the PMF event. After the Incident Controller has confirmed that ponding is to 300mm depth in - the staff is also responsible to clamp in place demountable flood barriers behind the flood gate to the PMF height. The demountable flood barriers are to be located in close vicinity and easily accessible.
	Send an alert and occupant warning message over the PA system confirming a major flood event. Announce that there is water over the laneway.
	Immediately commence door to door entry to each accommodation at Lower Ground Level evacuating them to Ground level above systematically to communal lounge and study area where a headcount will be undertaken and numbers reported to the

	incident controller.
	Confirm any remaining people in the lower ground level have been evacuated.
3) Alert will remain in place for approximately 2 hours or such time that the ponding depth recedes	Confirm that there is no ponding in the courtyard. Once floodwater subsided below 300mm in the southern laneway, the lower ground floor would be inspected by the incident controller. Once it has been confirmed that the water level has reduced in a level of less than 300mm in the southern laneway for a period of at least 2 hours and if determined safe a final headcount would be undertaken. Upon confirmation of all persons safe and accounted for the incident controller may announce that residents can return to lower ground floor and courtyard and remove the flood barriers
4) Flooded areas are to remain off limits until ponding is cleared. The directions of police and SES are to be followed at all times.	

*(** Note: Note that Iglu Incident Controller will have access keys to all accommodation in case of emergency)*

Prepared by
TAYLOR THOMSON WHITTING (NSW) PTY LTD

NEMESIO BIASON
Associate Director

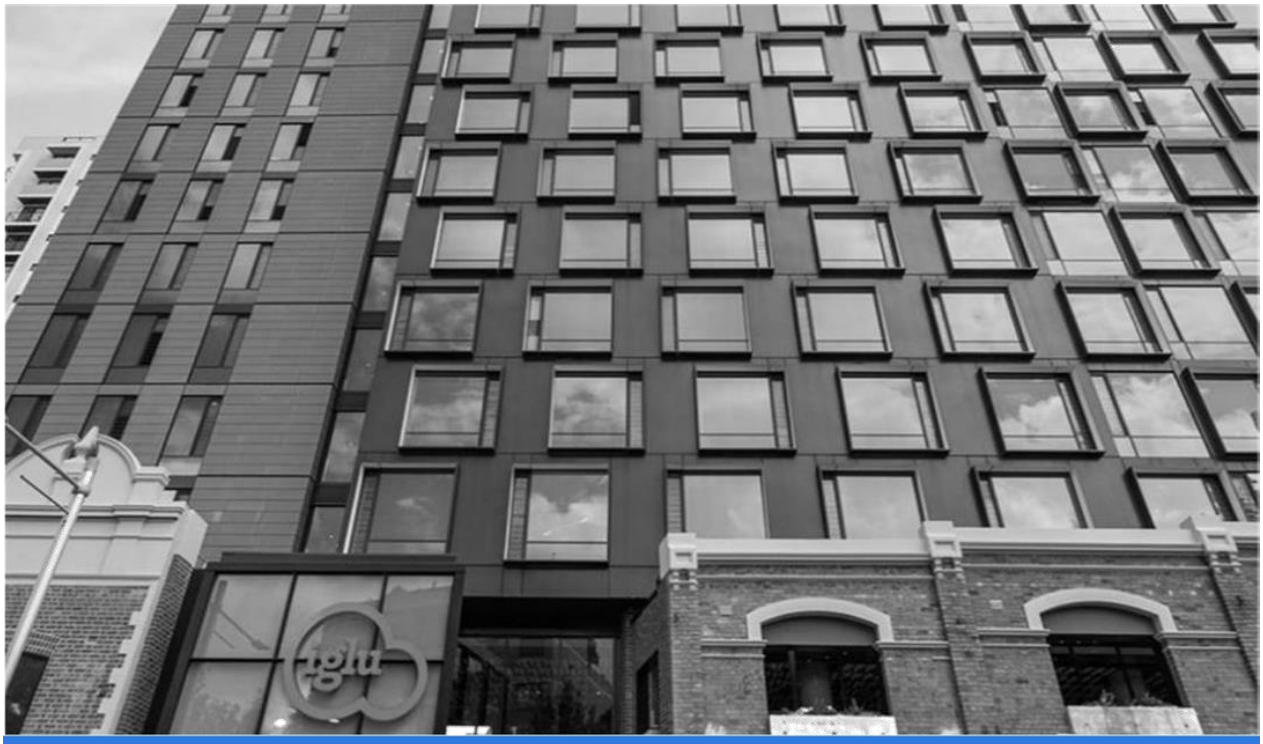
Reviewed & Authorised By
TAYLOR THOMSON WHITTING (NSW) PTY LTD

Stephen Brain
Technical Director

P:\2018\1819\181975\Reports\TTW\Civil_FloodResponse\190919_Flood Response Management Plan.docx

Appendix 3 – Green Travel Plan

mecone



Proposed Student Accommodation at 74 Carlton Crescent, Summer Hill

Green Travel Plan

Prepared for:

Iglu Pty Ltd

13 September 2019

The Transport Planning Partnership

Item 5

Attachment 2

ttpp transport planning

Proposed Student Accommodation at 74 Carlton Crescent, Summer Hill

Green Travel Plan

Client: Iglu Pty Ltd

Version: Final 04

Date: 13 September 2019

TTPP Reference: 19115

Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
Final	26/04/19	Charbel Hanna	Oasika Faiz	Ken Hollyoak	Ken Hollyoak
Final 02	01/05/19	Oasika Faiz	Oasika Faiz	Ken Hollyoak	Ken Hollyoak
Final 03	12/09/19	Oasika Faiz	Oasika Faiz	Ken Hollyoak	Ken Hollyoak
Final 04	13/09/19	Oasika Faiz	Oasika Faiz	Ken Hollyoak	

ttpp transport planning

Table of Contents

Tables

Figures

APPENDICES

1 Introduction

1.1 Background

The proposed student accommodation is located at 74 Carlton Crescent, Summer Hill. The development would involve the construction of a new three to four storey student accommodation building with 184 rooms and ancillary common areas (living rooms, laundry, waste rooms etc). The development also proposes a bicycle storage area with capacity for 52 bicycles.

The proposed development does not include any on-site car parking provisions as is typical of student housing developments and other Iglu sites. Iglu currently operate several student housing facilities and over 3,000 beds, in Sydney, Melbourne and Brisbane which have no car parking provisions. Iglu operate with a philosophy that encourages staff and students to use sustainable transport modes (i.e. public transport, cycling and walking) and has successfully operated with no complaints from students on the lack of parking provision or from Councils about students driving and parking off-site.

The Transport Planning Partnership (TTPP) has prepared this Green Travel Plan (GTP) on behalf of Iglu Pty Ltd to manage the future travel demand following the occupation of the development.

The implementation of this GTP, in combination with no on-site car parking provisions, will be key to ensuring that students and staff are encouraged to use sustainable transport.

1.2 Types of Travel Plan

There are two distinct types of travel plans:

1. To change the travel behaviour at an existing site (i.e. reduction of car use, especially if only used by one person). Such plans would be implemented at large administrational buildings (e.g. government hospitals). This would aim to achieve a modal shift when compared against a stated benchmark. This would include monitoring the plan over a period after opening with more measures introduced if stated objectives were not achieved.
2. To influence the travel behaviour of a site prior to it being occupied. This can include such measures as locating the site next to a railway station, reducing on-site parking (especially for commercial buildings). Providing information and ensuring the development ties in with the sustainable active travel initiatives outside of the site. This travel plan would aim to achieve a lower car driver mode upon occupation compared with comparable sites.

This GTP falls into the latter category where the majority of green travel initiatives are provided prior to occupation of the site. However, Iglu would provide ongoing monitoring of its site once occupied to update the GTP measures as required and ensure appropriate travel outcomes.

1.3 The Role of a Green Travel Plan

The purpose of a GTP is to encapsulate a strategy for managing travel demand that embraces the principles of sustainable transport. In its simplest form, this GTP encourages use of transport modes that have low environmental impacts, for example active transport modes including walking, cycling, public transport, and better management of car use.

Active transport presents a number of interrelated benefits including:

- improved personal health benefits
- reduced traffic congestion, noise and air pollution caused by motor vehicles
- greater social connections within communities, and
- cost savings to the economy and individual.

In order to ensure that the GTP meets its intended objectives, a review of '*best practice*' guidelines such as the City of Sydney '*Guide to Travel Plans*' and '*The Essential Guide to Travel Planning*' prepared by the United Kingdom Department of Transport, has been undertaken.

From the above review, the key themes applicable to the GTP include:

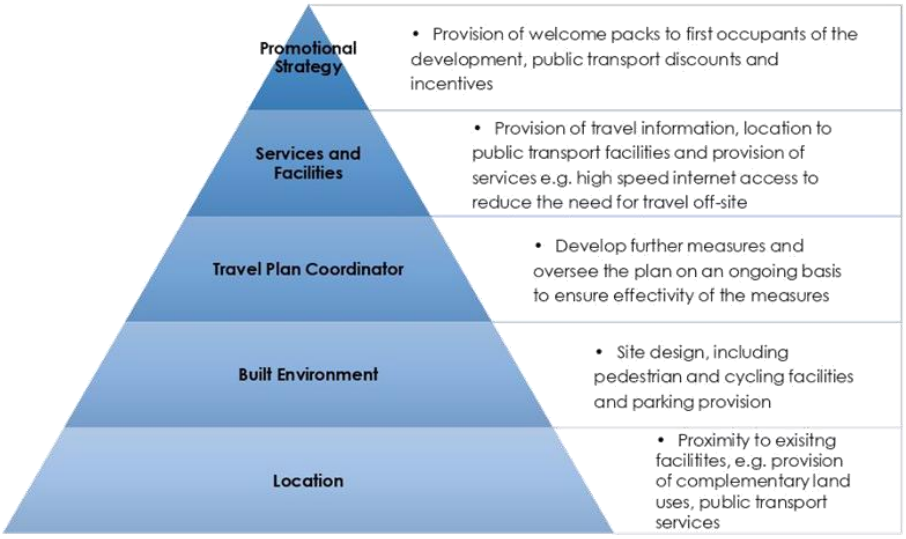
- **Site audit and data collection:** A desktop audit has been undertaken in order to identify and document the existing issues and opportunities relevant to site and its accessibility particularly by non-car modes. Opportunities to improve amenity, incentivise non-car travel and remove barriers to the use of sustainable transport modes are then dealt with under the Site-Specific Measures, detailed in Section 5.1. Notably, as the site is not currently occupied by the proposed development, travel surveys at a similar development have been used to inform the baseline data for modal splits to/from the subject site.
- **Audit of policies:** An audit of key policy documents has been undertaken to assist with defining the direction and purpose of the GTP, aligned with the key targets and objectives from a local and regional perspective.
- **Private vehicle travel management:** This GTP provides a strategy to reduce travel by private vehicles with nil car parking provision.
- **Local alliances:** The development of relationships between the Proponent and various stakeholders (such as the Council, the Roads and Maritime Services and Transport for New South Wales) will assist the Proponent in delivering improved transport options.

1.4 Travel Plan Pyramid

The GTP will need to be tailored to the proposed development site to ensure appropriate measures are in place for the different land uses to promote a modal shift away from car usage.

The key elements of the GTP are shown in the Travel Plan Pyramid in Figure 1.1.

Figure 1.1: Travel Plan Pyramid



All elements in the Travel Plan Pyramid are critical to the success of the GTP, but Figure 1.1 illustrates that the key foundations to ensure the success of a GTP are:

- **Location** – proximity to existing public transport services and proximity to mixed land uses, e.g. shops and services, such that walking or cycling becomes the natural choices, and
- **Built Environment** – provision of high-quality pedestrian and cycling facilities, end-of-trip facilities and reduced car parking provision to encourage sustainable transport choices.

1.5 Drivers of the Travel Plan

There are a number of social, environmental and economic drivers for developing and implementing a GTP for developments as detailed below.

1.5.1 Car Parking

Car parks utilise valuable land resources and impact amenity. If the area continues to grow and there is no modal shift towards non-car transport modes, the car parking demand could

increase significantly. As such, the provision of car parking must reflect the site's proximity to public transport to influence a modal shift to more sustainable transport modes. As the site is located within close proximity to Summer Hill Station, there is strong justification to provide significantly less or no car parking to manage travel demand to/from the site. Furthermore, the cost to provide parking is significant and therefore, there are strong economic imperatives to reduce car parking demand by incentivising non-car travel modes i.e. to provide affordable housing for students.

1.5.2 Environmental Impacts

The transport sector (road, rail, air and ship) is Australia's third largest source of greenhouse gas emissions (GHG), accounting for 18 per cent of emissions in Australia in 2015 (Climate Council of Australia, 2016). Mitigating this impact is a key driver of the GTP. Within Australia, the transport sector has the highest rate of growth of GHG emissions per year having risen by 51 per cent since 1990 with private vehicles responsible for almost half of transport emissions. In comparison, travel modes such as walking and cycling have the lowest emissions while public transportation has significantly lower impact than the private vehicles. Notably, Inner West Council has committed actions to reduce carbon emissions and reduce its environmental impact by some 4,000 tonnes of CO2 every year. These actions include major infrastructure upgrades such as the provision of LED street lights and solar power supply to facilities and also discrete measures such as encouraging residents to ride a bike, walk and use public transport.

1.5.3 Health Benefits

The use of sustainable transport modes can have wide-ranging health benefits due to a corresponding reduction in greenhouse gas emissions and increase in physical activity from walking and cycling. The shift from private cars to sustainable transport "can yield much greater immediate health "co-benefits" than improving fuel and vehicle efficiencies" (World Health Organisation, 2011). The potential benefits can include reduced respiratory diseases from better air quality, prevention of heart disease, some cancers, type 2 diabetes and some obesity-related risks.

1.5.4 Social Equity

Transport has a fundamental role in supporting social equity, that is the equitable distribution of services, amenities and opportunities. The provision of sustainable transport modes can provide a more affordable alternative to car use. As such, it offers better mobility for women, children, young people, the aged, persons with disabilities and the poor, who have less access to private vehicles, thereby enhancing social equity.

1.5.5 Site Attraction

Provision of high-quality transport facilities (public transport, cycling and walking infrastructure) has a significant impact on the accessibility and therefore attractiveness of a site. Negative experiences and costs associated with travel can reduce the competitiveness of a student accommodation site. High quality and efficient transport systems are key to attracting and retaining students. Support for active transport modes is also highly desired by students, because it improves health and productivity.

1.5.6 Education and Leadership

Student accommodation sites would have a large number of new persons coming through each year and as such, the student accommodation provider would have a unique opportunity to educate students into sustainable travel behaviours. These travel behaviours can help shape long-term travel behaviours that extend long after their completion at the organisation. Successful travel planning and education can reduce traffic impacts on the road network while potentially supporting a positive influence on local areas by raising public transport service demand and improving amenity.

1.6 Transport Objectives

The following objectives have been identified in order to achieve the vision of the GTP:

Objective 1: Facilitate a modal shift towards more sustainable transport modes

- Improve access, safety, amenity and convenience of sustainable transport modes for travel to/from the site
- Incentivise sustainable transport modes and establish a culture of active and public transport use, and
- Improve awareness and knowledge of transport options available in the area.

Objective 2: Reduce car ownership and promote car share use

- Improve awareness and access to car share facilities available within the area
- Incentivise car share use as an alternative to owning a car, and
- Provide nil. car parking on-site to manage car use and ownership.

Objective 3: Reduce the need to travel off-site

- Provide amenities on-site to reduce travel requirements for students, and
- Encourage social interactions amongst students residing in the building to create a vibrant community on-site.

2 Existing Transport Policy Context

2.1 Summary of Key Policy Directions

The review of existing relevant policy clearly illustrates a number of themes that should inform the approach to ongoing management of transport demand, and investment in the transport network. These themes include:

- provision of high-quality local transport infrastructure, improved bike paths and networks, and improving accessibly and connectivity
- address car parking issues in key locations, including residential and business districts, and encouraging active transport
- create connected, liveable communities where people can walk, cycle and use public transport to promote healthier, active communities.

A summary of the existing policy framework documents is provided in Table 2.1.

Table 2.1: Summary of Policy Framework

Policy/Strategy	Key Aims/Objectives/Goals
Inner West Council	
General Strategy	Inner West council is committed to effectively managing and improving the ability for all residents and visitors to move around the LGA with ease. Council is committed to reducing car usage and increasing the use of public transport, walking and cycling. Council's aim is to increase the vibrancy of local neighbourhoods, reduce traffic congestion, enable better parking options, improve air quality and improve access to local places.
Active Transport Strategy	The strategy has been prepared to encourage more people to take up healthier transport options such as walking and cycling in the Cooks River to Iron Cove GreenWay. The GreenWay is a 5.8km environmental and active travel corridor linking the Cooks River at Earlwood with the Parramatta River at Iron Cove. It sets out a range of short and long-term initiatives that encourage more people to use the GreenWay for walking and cycling and make it attractive and convenient for users of all ages.
Parking Strategy	This strategy is developed to deliver a better balance of parking space for residents, businesses, shoppers, commuters and others. This would be all done while maximising the parking space already in place and delivering new appropriate spaces to manage changing parking needs over time.
NSW State Government	
New South Wales Long Term Transport Masterplan (NSW State Government, 2012)	The NSW Long Term Transport Masterplan guide the NSW Government's transport funding priorities over the next 20 years. As part of this Plan, a long-term action is to build a Second Sydney Harbour rail crossing, new CBD line and new CBD stations that will connect Redfern to Chatswood via the CBD. These new stations will relieve pressure on Central, Wynyard and Town Hall Stations. In addition to this, the Plan intends to upgrade the existing Redfern Station to address station access and connectivity issues and provide safe and convenient interchange with bus, pedestrian and cycle routes.
Future Transport Strategy 2056	The Strategy aims to increase the mode share of public transport services and reduce the use of single occupant vehicles. The Proposal will look to reduce private vehicle travel, aligning with the objectives of the Strategy.

Policy/Strategy	Key Aims/Objectives/Goals
Greater Sydney Region Plan: A Metropolis of Three Cities – Connecting People	The site is well located to contribute towards creating a 30-minute city. The close proximity of the site to the Summer Hill Station means students can easily access the site via public transport modes. The site thus aligns with the objectives of the Plan in creating accommodation near jobs, services, education and public transport facilities to contribute towards a 30-minute city.
Sydney's Cycling Future, Cycling for Everyday Transport (NSW State Government, 2013)	Sydney's Cycling Future's key strategy is to improve cycling infrastructure. The Three Pillars of Sydney's Cycling Future include: ▪ investing in separated cycleways ▪ providing connected bicycle networks to major centres and transport interchanges promoting better use of our existing network; and, ▪ engaging with our partners across government, councils, developers and bicycle users.

2.1.1 Greater Sydney Region Plans: 30-minute City

As indicated above, the Greater Sydney Commission's Greater Sydney Region Plan, the key purpose of the plan is to deliver a 30-minute city where jobs, services and quality public transport spaces are in easy reach of residences.

However, a recent study conducted by Deloitte Access Economics found that only 75 of the 313 Sydney neighbourhoods could currently be deemed to have easy access to major job hubs and other key services within half an hour. Based on the findings of the Deloitte study and work undertaken by Arup, a number of key performance criteria have been identified in order to achieve a 30-minute city:

- **Access to healthcare** – hospitals provide an important facility to many people and play a role in employment, education and training facilities. Parking is often limited at hospitals and as such, access via a variety of transport modes is required.
- **Access to retail services** – access to all forms of retail (supermarkets and specialist stores) is essential to achieve a 30-minute city. There has already been an increase in the number of mixed-use developments within Sydney to create micro-communities, which provide mixed retail services, residential, commercial and community facility uses.
- **Access to schools** – access to good schools relies on housing affordability, which also shape where teachers live. In particular, many students have good access to local schools, however some have to travel outside their catchment areas for specialist and selective schools. As such, it is important to create strong transport link to provide good access to local schools and connect teachers with their place of residence and work.
- **Access to further education facilities** – public transport links for TAFE and universities are vital as students and teachers often travel out of the local catchment to the educational facility as they are often located in areas with high property prices.
- **Quality of public transport facilities** –Whilst Sydney is a liveable city; it is often constrained by transport issues. As such, the provision of good quality, reliable public transport facilities are essential to achieve a 30-minute city.

- **Access to jobs** – people being able to live close to their jobs is fundamental to delivering a 30-minute city. The current Sydney CBD has the highest concentration of jobs but as found by the Deloitte study, the average one-way commute for those travelling into the CBD from outside the city is 63 minutes. The locations with the best access to jobs currently are located near railway stations, or close to major employment centres such as the Sydney CBD.
- **Access to residents** – a way of minimising travel needs is to locate jobs and services close to where residents live.

The subject site is located in close proximity to tertiary and further education institutions such as University of Sydney, University of Technology Sydney, University of Notre Dame and TAFE. Further to this, the site is also in close proximity to Sydney CBD which is a key employment hub which offers work opportunities for students, as well as abundant public transport options to/from the City.

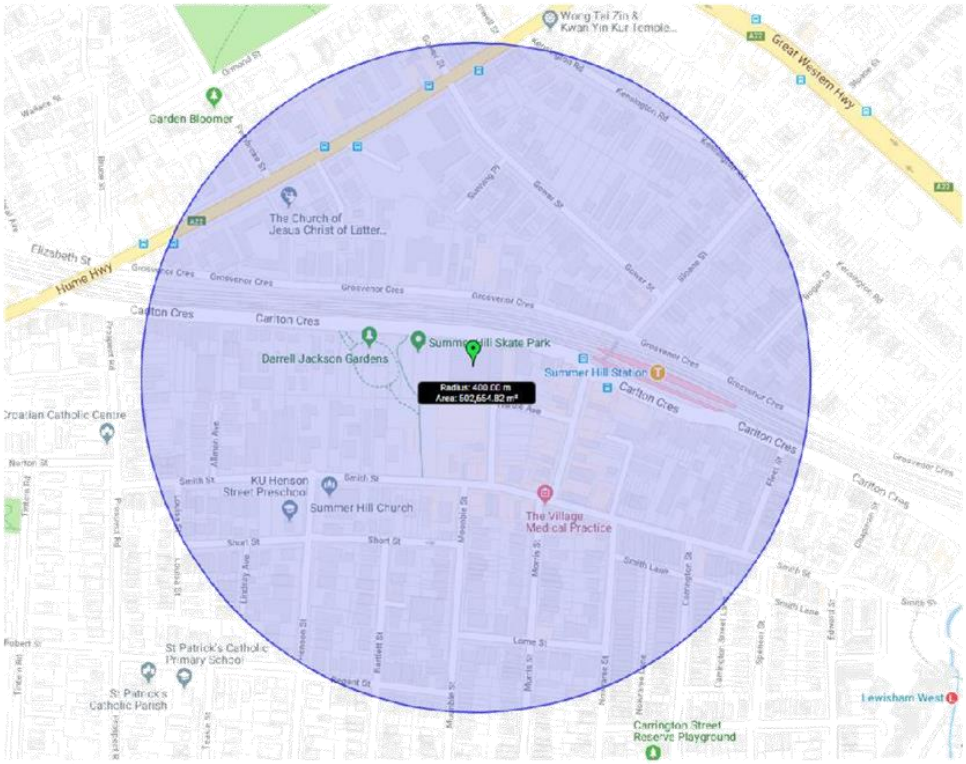
3 Existing Transport Context

3.1 Existing Public Transport Facilities

The site is well serviced by public transport, including rail and bus services, being located 200m (or a 2-minute walk) west of Summer Hill Station.

The site's proximity to existing public transport services is shown in Figure 3.1.

Figure 3.1: Site Proximity to Public Transport Facilities



Source: Nearmap

Summer Hill Station is serviced by the T2 Inner West & Leppington Line which provide connections to various destinations across the Sydney Metropolitan area including the Sydney CBD.

The site, via Summer Hill Station is a 13-16 minute trip to Redfern and Central Stations, where several major universities are located including University of Technology Sydney, University of Sydney and Charles Sturt University and TAFE NSW. Redfern and Central Stations provide a central hub to access the wider transport network in Sydney.

A summary of rail services and associated peak hour frequencies at Summer Hill Station is provided in Table 3.1.

Table 3.1: Train Services at Summer Hill Station

Route	Route Description	Typical Weekday Frequency	
		Morning Peak	Evening Peak
T2 Inner West and Leppington Line	Parramatta or Leppington to City	5 mins	10-15 mins
	City to Parramatta or Leppington	15 mins	15 mins

The subject site is also within a 10-minute walk to the light rail and bus services. Lewisham West Station is located some 900m to the south-east and services the L1 Dulwich Hill Line, providing light rail services between Dulwich Hill and Central. The L1 Dulwich Hill line provides services to Central every 5-8 minutes in the AM peak and has a travel time of approximately 32 minutes from Lewisham Station.

Frequent bus services are located along Parramatta Road with the eastbound bus stop located within 650m from the site and the westbound stop within 850m. In addition to this, night ride services are provided at Summerhill Station, located 200m from the site.

Table 3.2 presents a summary of the existing bus routes and associated frequencies within the immediate vicinity of the site.

Table 3.2: Summary of Bus Routes and Frequencies

Route	Nearest Bus Stop Distance from Site	Route Connectivity	Typical Weekday Frequency During Peak Hour
461	650-850m	Burwood to City Domain	10 mins
480	650-850m	Strathfield to Central Pitt St via Homebush Rd	15-20 mins
483	650-850m	Strathfield to Central Pitt St via South Strathfield	20 mins
413	600m	Campsie to City Martin Place	30 mins
N50	200m	Liverpool to City Town Hall	N/A; Night ride bus only

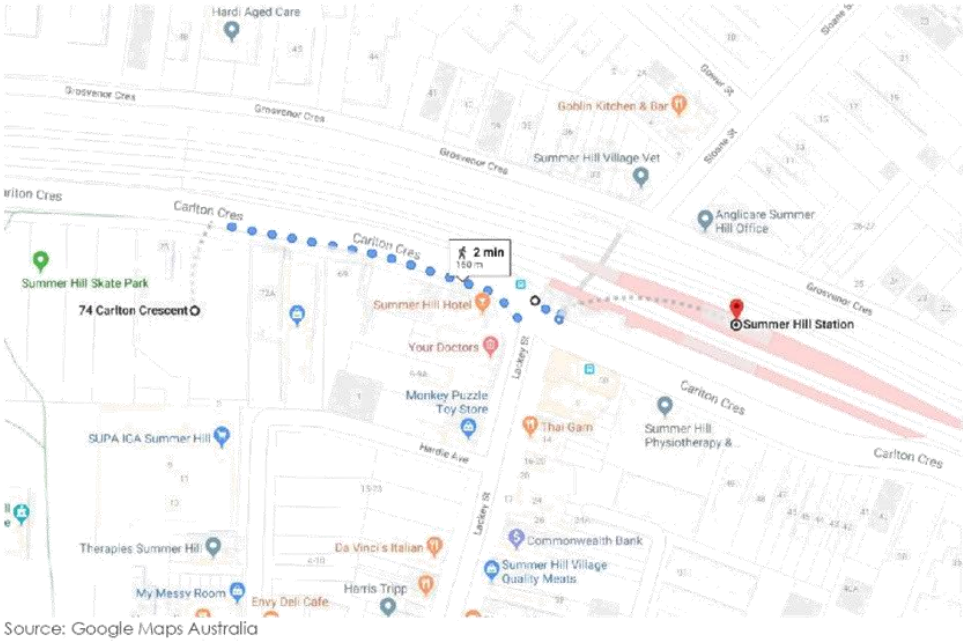
Reference: Transport for NSW

3.2 Pedestrian Infrastructure

Well-established pedestrian facilities are provided within the vicinity of the site. Sealed pedestrian paths are provided on Carlton Crescent, Lackey Street and Smith Street. Signalised pedestrian crossings are provided on all legs of in the intersection of Carlton Crescent and Lackey Street, providing safe access to and from Summer Hill Station.

The walking route from the site to Summer Hill Station is shown in Figure 3.2.

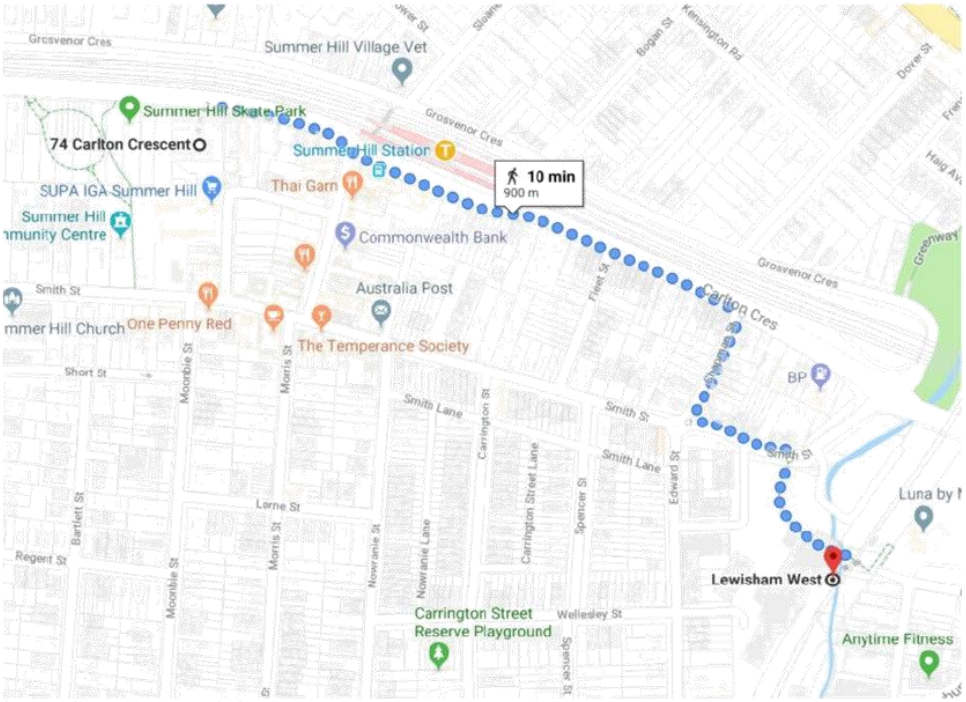
Figure 3.2: Walking Route to Summer Hill Station



Source: Google Maps Australia

As mentioned in Section 3.1, Lewisham West Light Rail Station is located some 900m east of the subject site. Given the proximity of the site, it is approximately a 10-minute walking distance to/from the station as shown in Figure 3.3.

Figure 3.3: Walking Route to Lewisham West Light Rail Station



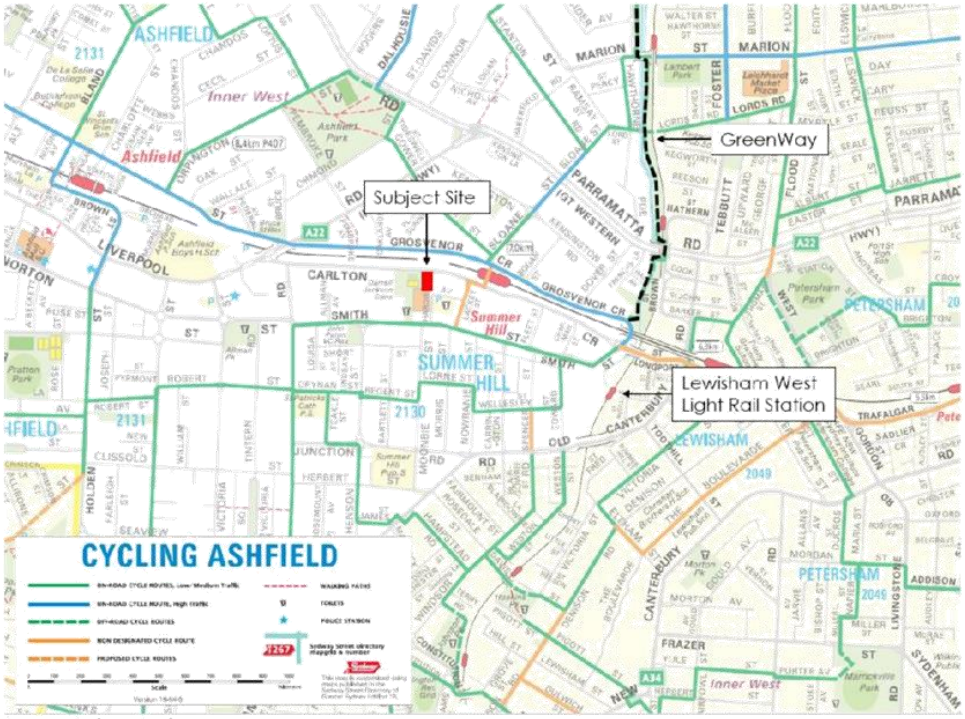
Source: Google Maps Australia

3.3 Cycling Infrastructure

On-road cycle paths are provided proximal to the site. An off-road shared path is provided along the GreenWay which runs through Haberfield, Leichhardt, Lilyfield, Rozelle etc. This shared path also connects to on-road and off-road cycling paths towards University of Sydney, University of Technology Sydney, University of Notre Dame, TAFE and Sydney CBD.

Figure 3.4 presents a map of the existing cycleways within the immediate vicinity of the site.

Figure 3.4: Cycleway Map



Source: Sydney Cycleways

3.4 Car Share Facilities

Car share schemes are a flexible, cost effective alternative to car ownership and is a convenient and reliable way for residents to use a car when they need one. GoGet is a car share company operating in Australia, with a number of pods located within the area.

Car share is a concept by which members join a car ownership club, choose a rate plan and pay an annual fee. The fees cover fuel, insurance, maintenance, and cleaning. The vehicles are mostly sedans, but also include SUVs, station wagons and vans. Each vehicle has a home location, referred to as a "pod", either in a parking lot or on a street, typically in a highly-populated urban neighbourhood. Members reserve a car online and/or telephone and use a swipe card to access the vehicle.

A study was commissioned by the International Carsharing Association in 2016[1], to review the impact of the car share services in Australia after more than a decade of operation. The study focuses on the City of Sydney council area which had about 20,000 users and 805 car share vehicles at the time of the study. The findings of the study indicate that car share users

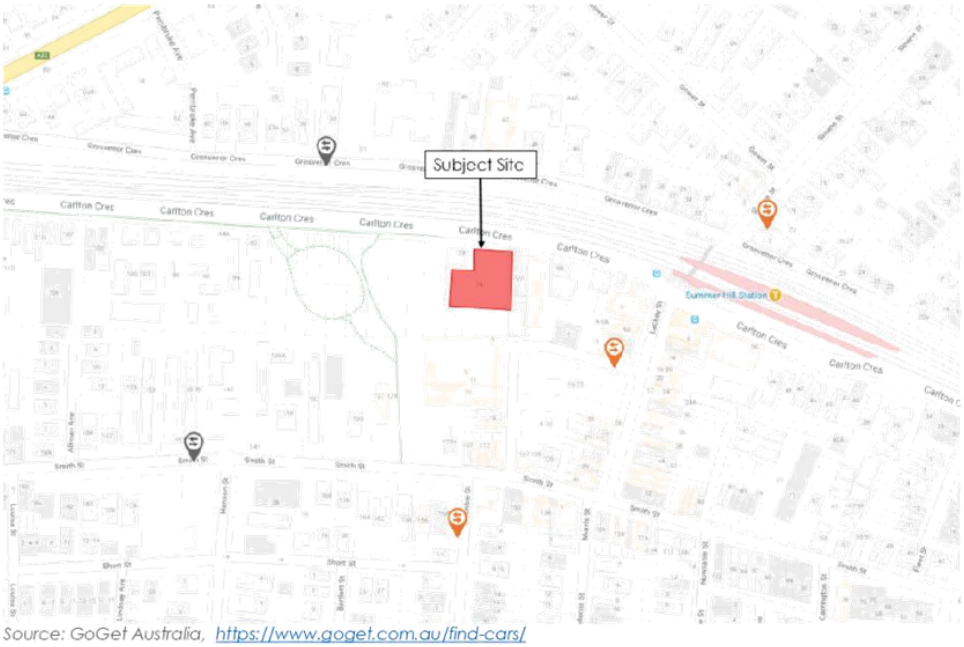
[1] *Phillip Boyle & Associates, January 2016, The Impact of Car Share Services in Australia*

reduce their overall vehicle kilometres travelled (VKT) per year by 50 per cent compared people who own a private vehicle. The resulting impact is reduced congestion on roads, lower levels of CO_2 pollution, fewer casualty accidents and an increase in use of active transport methods.

Notably, the City of Sydney Council has reported that "*a single car share vehicle can replace up to 12 private vehicles that would otherwise compete for local parking*".

Figure 3.5 shows the location of the existing GoGet pods (indicated by the yellow highlights) within the immediate vicinity (<400m walking distance) of the site.

Figure 3.5: Location of Existing GoGet Pods



Source: GoGet Australia, https://www.goget.com.au/find-cars/

Figure 3.5 indicates that there are four car share facilities available within the immediate vicinity of the site. Based on statistical information outlined above, these four car share vehicles could theoretically replace the need for 48 private vehicles in the local area.

Notwithstanding this, promoting the use of these existing car sharing facilities should be undertaken to ensure existing car share facilities are used to cater for any vehicle trips associated with the proposal if required.

3.5 Bike Share

Dockless bike share is a new program which provide users with the opportunity to ride on a bike anytime. Users will be required to download the app to reserve and unlock a bike. Bicycles can be used for return or one-way trips and can be picked-up and returned on bicycle parking areas, train stations, or even on footpaths provided that the footpath is not too busy and is wide enough so the bicycles will not impede pedestrians on the footpath.

In December 2017, six Sydney councils (including Inner West Council) devised the Inner Sydney Bike Share Guidelines. These guidelines set out expectations for bike share operators and users and apply across the six municipalities of Canada Bay, City of Sydney, Inner West, Randwick, Waverley and Woollahra.

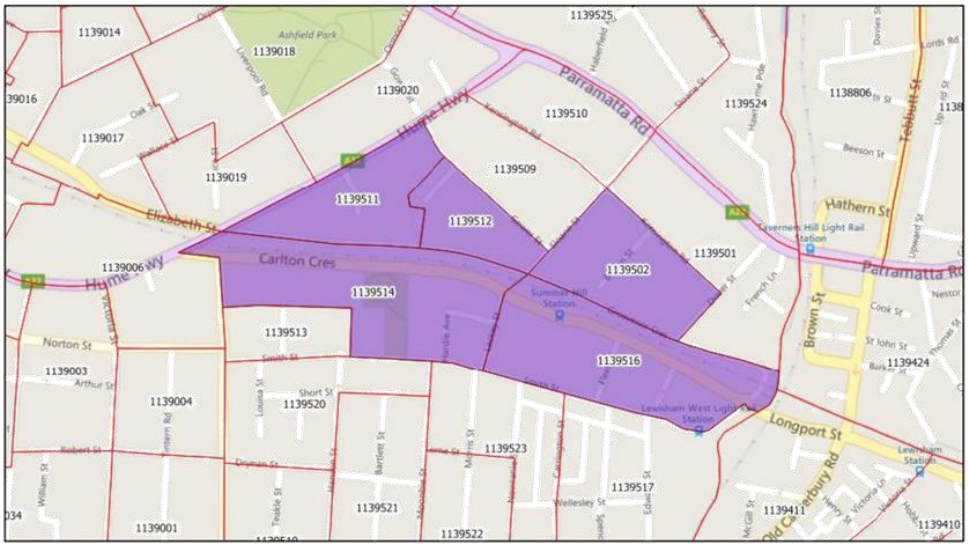
Bike sharing programs offer flexibility and opportunity for people to choose active transport for short trips, especially for those who are less likely to own bicycles.

Several dockless bike sharing services such as moBike and Lime are available in the Sydney. It is noted that Lime is an electric-assisted bike and has approximately 2,000 bikes available in the city streets since its launch in November 2018.

3.6 Existing Modal Share

2016 Census data from the Australian Bureau of Statistics (ABS) has been obtained to understand the existing method of travel to work patterns of residents living around Summer Hill Station. Five ABS statistical area 1 (SA1) zones have been selected as shown in Figure 3.6.

Figure 3.6: Selected Zones (Statistical Area 1)



The data indicates that the primary mode of travel to work for residents living in the selected areas is train with a 52% mode share and car (drivers and passenger) with a 36% mode share. The resident mode share splits are summarised in Table 3.3.

Table 3.3: Existing Mode Share of Residents

Method of Travel	Resident Mode Share
Car	36%
Train	52%
Bus	2%
Tram	1%
Bicycle	3%
Walked Only	4%
Other	2%
Total	**100%**

It should however be noted that a student population is much less likely to be car owners/drivers and consequently, the existing car use would be anticipated to be much lower.

In addition, many universities/ higher education sites are accessible by public transport:

- University of Technology Sydney (UTS) – 30min by train
- TAFE Ultimo – 30min by train
- University of Sydney (USYD) – 25 to 30min by bus or train
- The University of Notre Dame Sydney – 25 to 30min by bus or train
- Australian Catholic University (ACU) – 40min by bus.

4 Mode Share Targets

The aim of the GTP is to encourage a modal shift away from private vehicles by implementing measures that influence the travel patterns of residents living at the proposed student accommodation development. The implementation of the GTP would be regularly monitored to ensure that the GTP is having the desired effect. The success of the GTP is measured by setting modal share targets and identifying the measures and actions that have the greatest impact.

As the site is not currently occupied, the mode share targets for the site have been based on the existing mode share of residents living around the development site. However, a student accommodation development is likely to lean more towards non-car modes of transport than general residential, with students typically preferring public transport. This is influenced by the fact that many universities are situated around good public transport and poor car accessibility. A large number of students living at said student accommodation sites are internationally based and are therefore not willing to invest in a car or motorcycle, nor are they motivated to obtain relevant driving licenses because of their relatively short stays

Additionally, the development site does not include any car parking provision and is well situated in relation to proximity to services and facilities e.g. the supermarket IGA Summer Hill is located directly south of the site, and other services (bank, medical centres) is located within walking distance.

On this basis, it is considered that the target mode shares for the site would not favour car as a mode share. As such, a baseline target of 0% car mode share and 75% train share has been set for this GTP.

The overall mode share targets for the proposal are summarised in Table 4.1.

Table 4.1: Mode Share Targets

Method of Travel	Existing Resident Mode Share	Target Student Mode Share
Car	36%	0%
Train	52%	75%
Bus	2%	8%
Tram	1%	5%
Bicycle	3%	6%
Walked Only	4%	4%
Other	2%	2%
Total	**100%**	**100%**

5 Methods of Encouraging Sustainable Transport

To achieve the objectives of the GTP, measures will be put in place to influence the travel patterns to/from the site, with a view to discourage car usage from Day One.

5.1 Site Specific Measures

5.1.1 Provision of Nil Car Parking

Student accommodation sites are categorised as "boarding houses" and therefore, practitioners assess the parking requirements under the State Environmental Planning Policy (Affordable Rental Housing) 2009. However, in retrospect, these parking requirements are considered onerous for student accommodation sites for the following reasons:

- student accommodation sites do not typically generate a demand for car parking as such sites are specifically targeted at students who do not have a car and attend nearby tertiary educational campuses that are also easily accessible by public transport
- the site has been specifically chosen as it is located near high frequency public transport and local amenities, services and recreational facilities to remove the need for car travel.

Furthermore, students would not be permitted to seek resident parking permits from Council with signage on-site and a notice included in all students welcome email/ package indicating this.

In addition, students will be informed of alternative modes of transport to the site from key locations (e.g. airport). The welcome email for the subject Summer Hill site will also iterate the lack of parking availability on-street as well as on-site. An example of a welcome email for an existing Iglu student accommodation site is provided in Attachment B.

In this regard, it is proposed to provide nil car parking for the site. This is consistent with other student accommodation sites across Australia by Iglu and other major student accommodation providers such as Urbanest and SCAPE. In fact, the provision of nil car parking is one of the critical factors to ensure that the mode share target of 0 percent car drivers can be met for the site.

5.1.2 Walking and Cycling

The student accommodation provider should consider establishing a student walking and cycling group, where all students would be invited to walk and/or cycle together around the neighbourhood, followed by recreational activities/special events within the site. This initiative

would help promote and encourage social inclusion, as well as promote walking and cycling as the choice of travel.

5.1.3 Public Transport

Public transport maps will be provided on newsletters, websites, social media to make students more aware of the alternative transport options available in the area. The format of the map will be based upon the travel access guide. This travel access guide will form part of a welcome pack for all students to ensure that they are made aware of the available transport options. In addition to this Iglu provide their residents with a Welcome Email (as shown in APPENDIX B) which informs students of public transport options to the site from Sydney Airport, as well as the necessary requirements to make use of public transport in Sydney, i.e. the possession of an Opal card. This ensures that travel patterns can be influenced from day one to establish better transport habits at the start of occupation.

5.1.4 Car Sharing

As detailed in Section 3.4, there are a number of existing car share facilities (e.g. GoGet) within the immediate vicinity of the site. If car use is required, students will be encouraged to use existing car share facilities in the area. Information of the existing car share facilities within the immediate vicinity of the site will be made available to all students as part of the welcome pack. Notably, students receive a low membership fee option as part of the GoStudent membership. It is recommended that the student accommodation provider negotiate a bulk deal with GoGet to ensure students residing at the proposed development have the best options available.

5.1.5 Off-site Measures

The provision of high-quality internet services will also be provided to enable students to study on-site, rather than travelling off-site to a library or campus. This would also be accompanied by the provision of dedicated study rooms, lounge and game areas, quite areas, cinema rooms and a gym for students residing in the building to create a vibrant community such that all the essentials for a student are made available on-site to negate the need to travel off-site.

5.2 GTP Information

The information provided within the GTP will be provided to students in the form of a package of easy to understand travel information known as a Travel Access Guide (TAG). This will be included in the welcome email provided to students prior to occupation. An example of a welcome email sent to students at an existing Iglu student accommodation site is provided in Appendix B.

TAGs provide customised travel information for people travelling to and from a particular site using sustainable forms of transport – walking, cycling and public transport. It provides a simple quick visual look at a location making it easy to see the relationship of site to train stations, light rail stations, bus stops and walking and cycling routes.

Such TAGs encourage the use of non-vehicle mode transport and can reduce associated greenhouse gas emissions and traffic congestion while improving health through active transport choices.

They can take many forms from a map printed on the back of business cards or brochures. Best practice suggests that the information should be as concise, simple and site centred as possible and where possible provided on a single side/sheet. If instructions are too complex, people are likely to ignore them.

A draft TAG has been prepared for the site in the form of a brochure and is provided in **Appendix A**. Iglu will provide the TAG at their touch screens in the lobby (an example of current practice: https://redfern.myiglu.com.au/information-map/) and included in their Quick Guides that are given out to students as part of their Welcome Pack upon check-in. The Quick Guides also include bike storage information and amenities within walking distance.

In addition, there would be active management on-site that would assist students with their travel needs and queries and offer students the TAG or further information as required.

5.3 Information and Communication

Several opportunities exist to provide residents and visitors with information about nearby transport options. Connecting residents and visitors with information would help to facilitate journey planning and increase their awareness of convenient and inexpensive transport options which support change in travel behaviour.

Transport NSW info

- Bus, train and light rail routes, timetables and journey planning are provided by Transport for New South Wales through their Transport Info website: http://www.transportnsw.info/

Sydney Cycleways

- City of Sydney provides a number of services and a range of information to encourage people of all levels of experience to travel by bicycle. http://sydneycycleways.net/

Similarly, such phone apps as TripView display Sydney public transport timetable data and shows a summary view showing current and subsequent services, as well as a full timetable viewer. This timetable data is stored on the phone, so it can be used offline.

Connecting students via social media may provide a platform to informally pilot new programs or create travel-buddy networks and communication.

Iglu is currently undertaking research and development for mobile app to enable students to have easy access to information and news via their mobile phones. The mobile app is anticipated to include the information presented in the TAG and any new initiatives run by Iglu to promote sustainable travel solutions, plus information as presented in their Quick Guides and the myiglu webpage.

5.4 Actions

A summary of the key strategy and framework action table is shown in Table 5.1. It should be noted that this framework action table will be updated as required. However, it is stressed that the availability of the suggested strategies from Day 1 upon occupation is a key factor in influencing travel patterns.

Table 5.1: Framework Action Table

Action	Objective	Responsibility	Timeline
1. Provide nil car parking	1, 2	Proponent	Prior to Occupation
2. Provide secure bicycle parking	1	Proponent	Prior to Occupation
3. Provide public transport noticeboard at key locations within the site in the form of a travel access guide. This will also be posted on student accommodation provider's website and included as part of the welcome pack distributed to all students prior upon occupation.	1, 2	Travel Plan Coordinator	Prior to Occupation
4. Provide high quality telecommunication services and complementary uses on-site	3	Proponent	Prior to Occupation
5. Provide students with a TAG on day one of occupation and post the TAG on noticeboards, front entrances, website, social media etc.	1, 2, 3	Travel Plan Coordinator	Upon Occupation
6. Provide discounted GoGet memberships for students and provide information of existing car share facilities in the area as part of the welcome pack for all students	2	Proponent/ Travel Plan Coordinator	Ongoing
7. Establish Walking Groups and Bicycle User Groups with associated online forums	1, 2, 3	Travel Plan Coordinator	Ongoing
8. Ongoing review of the GTP to introduce additional measures as required	1, 2, 3	Travel Plan Coordinator	Ongoing
9. Development of an Iglu mobile app that would provide students easy access to all information including the TAG.	1, 3	Travel Plan Coordinator	Ongoing

6 Management and Monitoring of the Plan

6.1 Management

There is no standard methodology for the implementation and management of a GTP. However, the GTP will be monitored to ensure that it is achieving the desired benefits. The mode share targets set out in Section 4 are used in this regard to ensure there is an overall goal in the management of the GTP.

The monitoring of the GTP would require travel surveys to be undertaken with a focus to establish travel patterns including mode share of trips to and from the Site. It is anticipated that the first set of surveys would be undertaken within six months of first occupation to obtain the baseline mode shares for the site.

The implementation of the GTP will need a formal Travel Plan Co-ordinator (TPC), who will have responsibility for developing, implementing and monitoring the GTP. The TPC will be an appointed Iglu staff member or an independent expert.

It will also be necessary to provide feedback to residents and visitors to ensure that they can see the benefits of sustainable transport.

Indeed, there are several keys to the development and implementation of a successful GTP. These include:

- **Communications** – Good communications are an essential part of the GTP. It will be necessary to explain the reason for adopting the plan to promote the benefits of sustainable transport options.
- **Commitment** – GTPs involve changing established habits or providing the impetus for people in new developments to choose a travel mode other than car use. To achieve co-operation, it is essential to promote positively the wider objectives and benefits of the plan. This commitment includes the provision of the necessary resources to implement the plan, beginning with the introduction of the *'carrots'* or incentives for changing travel modes upon occupation.
- **Building Consensus** – It will be necessary to obtain broad support for the introduction of the plan from the residents and visitors.

Once the plan has been adopted, it is essential to maintain interest in the scheme. Each new initiative in the plan will need to be publicised and marketing of the project as a whole will be important.

7.2 Remedial Actions

A continuous review will take place to identify remedial actions should the modal share targets not be achieved. However, the following measures are proposed both as discrete measures (e.g. car share) and those being proposed as part of the proposed development:

- an increase in bicycle parking facilities
- provision of a shuttle bus to key locations
- on-road cycling classes (or marketing of existing classes held by others e.g. City of Sydney cycling classes)

Alternatively, the TPC could work with council to see how the measures might be aligned with council's strategic planning for active travel.

7.3 Consultation

The results of the Green Travel Plan will be communicated with the student accommodation provider, students and staff via the noticeboard, newsletters, email and website.

As such, it is recommended that a summary letter is produced presenting the results of the survey within one month of the undertaking of the travel surveys (say 6-months post-occupation). The travel survey will be either undertaken by the Travel Plan Coordinator (TPC) or organised by the TPC to a traffic consultant who specialise in undertaking a travel survey. The letter/report may be also appended to the GTP and submitted to Council for comment. Subsequent surveys would be undertaken after one, three and five years.

Communication to the student accommodation provider, students and staff may be carried out in a similar form by public display of the GTP on noticeboards. Alternatively, a news article on the matter could be included on newsletters and/or an online website.

7 Conclusion

This GTP notes a number of transport demand management initiatives to assist with achieving a 0 per cent target car driver mode share for this proposed student accommodation.

In addition, the proposed development does not include any on-site car parking provisions as is typical of student housing developments and other Iglu sites. Iglu currently operate several student housing facilities and over 3,000 beds, in Sydney, Melbourne and Brisbane which have no car parking provisions. Iglu operate with a philosophy that encourages staff and students to use sustainable transport modes (i.e. public transport, cycling and walking) and has successfully operated with no complaints from students on the lack of parking provision or from Councils about students driving and parking off-site.

The implementation of this GTP, in combination with no on-site car parking provisions, will be key to ensuring that students and staff are encouraged to use sustainable transport.

It is however recommended that travel surveys be undertaken 6-months post-occupation of the site, with this draft GTP updated accordingly to suit the site's modal splits and findings of the travel surveys, including identification of opportunities and constraints to influence further changes to the travel behaviour of the residents wherever possible.

Subsequent surveys should be undertaken after one, three and five years of occupying the development.

Iglu as an operator of several student accommodation sites and manager of other similar GTPs, is well placed to undertake post-occupation maintenance and management to ensure the GTP is implemented well and continues to be successful in encouraging active and public transport.

ttpp transport planning

Appendix A

Transport Access Guide

Transport Access Guide

74 Carlton Crescent, Summer Hill

Student Accommodation

Use active and public transport to get around

Getting Around

Train

Summer Hill Station
(2-minute walk)

T2 Inner West & Leppington Line

Journey Times

12 minutes to Redfern
15 minutes to Central
8 minutes to Newtown
4 minutes to Ashfield
30 minutes to Sydney Airport
31 minutes to Parramatta
35 minutes to Bondi Junction

Public Transport Information

Plan your trip using Sydney's Trip Planning Tool:
transportnsw.info/trip

Or the RMS Cycleway Finder:
https://www.rms.nsw.gov.au/maps/cycleway_finder

Light Rail

Frequent Light Rail services are available at Lewisham West Station via the Dulwich Hill to Central line

These services run every 5-8 minutes during the peak hours, and every 15 minutes thereafter

It typically takes 33 minutes to go from Lewisham West Station to Central Station

Bus

Bus services are available on Parramatta Road and Junction Road within a eight minute walk from the site.

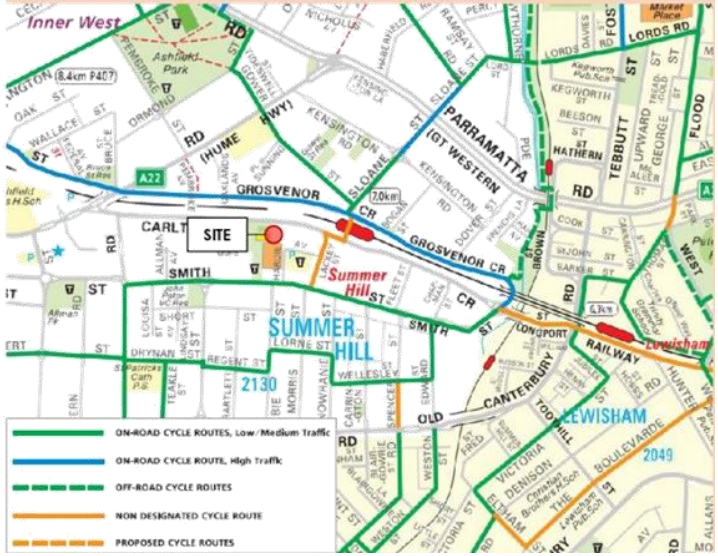
Route	Description
461	Burwood to City Domain
480	Strathfield to Central Pitt St via Homebush Rd
483	Strathfield to Central Pitt St via South Strathfield
413	Campsie to City Martin Place

Cycle

There are many cycleways in the proximity of the site, providing connectivity to Sydney CBD, Inner Sydney and Inner West, as well as educational institutions

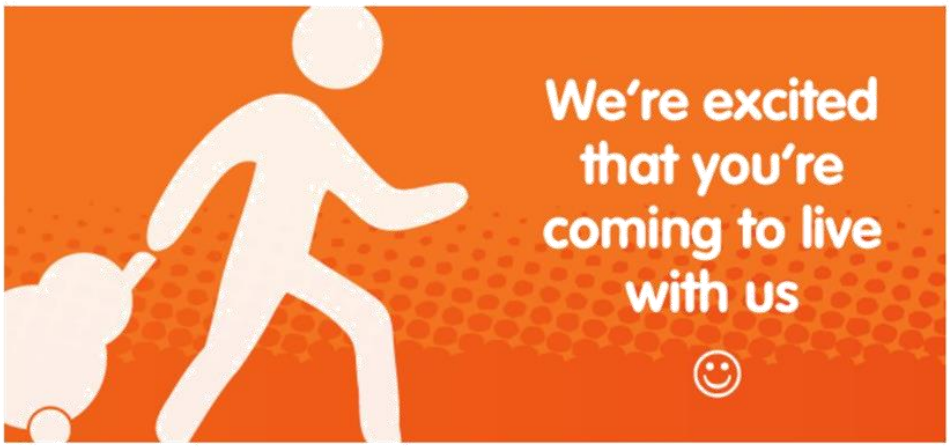
Cycling time to University and Colleges

University of Sydney – 20 minutes
University of Notre Dame –22 minutes
University of Technology Sydney/ TAFE Ultimo – 24 minutes
Australian Catholic University – 26-30 minutes



Appendix B

Example Iglu Welcome Email



Dear [Name]

We are looking forward to welcoming you to Iglu Redfern.

As your arrival date is just around the corner, here are a few things to help ensure a smooth check-in process.

GETTING TO IGLU REDFERN

We are located at 66 Regent Street, Redfern NSW 2016.

Coming from the airport: The easiest options are a taxi, Uber or an **Iglu Airport Transfer**. If you would like to be picked up from the airport, please let us know. The cost is AUD70 and we require at least 48 hours' notice for bookings.

You can also catch the AirportLink train to Central Station and change trains to go one stop to Redfern. There are lots of transport apps you can use such as Arrivo Sydney, NextThere or TripView to plan your trip (see options here). Travel time is approximately 20 minutes.

Driving yourself: You can just enter Iglu Redfern into Google Maps for the best directions from your location. We don't have parking but there is street parking along Regent Street and other nearby streets, such as Redfern Street, which is directly opposite.

Train: If you're arriving by train, take the exit on your right. Go through the ticket barriers. Cross over the traffic lights. Walk through the pedestrian mall and turn right onto Regent Street. Iglu Redfern is about 20 metres along the footpath. You can't miss it!

ABOUT YOUR APARTMENT

If you are moving into a shared apartment, the size of your bed is **king single**. If you are moving into a studio apartment, the size of your bed is **double**. Please keep this in mind when packing or purchasing your linen.

The nearest place to purchase bed linen, pillows and pillow cases, toiletries, kitchenware and cutlery is Broadway Shopping Centre, which is a 4-minute taxi or Uber ride from Iglu Redfern.

Alternatively, you can purchase a **Kit Out My Iglu** kit from us and it will be waiting for you in your room.

SMOOTH CHECK-IN (AND THINGS TO BRING WITH YOU)

To ensure your arrival is as smooth as possible, please send us your estimated arrival date and time to minimise delay in checking you into your apartment. You will need to have a copy of the following items with you:

- ✓ Passport/Passport Copy/Photo ID
- ✓ Confirmation of Enrolment (CoE)/Proof of Enrolment

Our front desk operates hours are:

- 9am – 7pm (Mon to Fri)
- 10am – 6pm (Sat & Sun)

If you are checking in during these hours our friendly team will be here to greet you and run through everything you need to settle in. If you arrive outside of these hours, don't worry, you can contact one of our friendly Resident Leaders on +61 426 709 463 and they will check you in.

We look forward to welcoming you to the Iglu family and if you have any further questions or concerns, please don't hesitate to contact us.

SOME OTHER HELPFUL INFORMATION

We look forward to welcoming you to the Iglu family and if you have any further questions or concerns, please don't hesitate to contact us.

The Transport Planning Partnership
Suite 402 Level 4, 22 Atchison Street
St Leonards NSW 2065

P.O. Box 237
St Leonards NSW 1590

02 8437 7800

info@ttpp.net.au

www.ttpp.net.au

Appendix 4 – Confirmation of Sprinkler

STEVE WATSON & PARTNERS
BUILDING CODE CONSULTANTS • BUILDING SURVEYORS & CERTIFIERS

Steve Watson and Partners Pty Ltd
Level 17, 456 Kent Street, Sydney NSW 2000
Phone: (02) 9283 6555 | Fax: (02) 9283 8500
SYDNEY • MELBOURNE • BRISBANE • CANBERRA
info@swpartners.com.au www.swpartners.com.au
ABN 33 600 478 402

Job No. 2018/3123

Wednesday, September 18, 2019

Attention: Michael Hanisch

Mecone
Level 12, 179 Elizabeth Street
Sydney NSW 2000

Dear Michael,

RE: Iglu Summer Hill – Application of sprinklers

We write to confirm under BCA 2019 the Iglu Summer Hill project requires the provision of a sprinkler system which is proposed as part of the design.

If you have any queries please do not hesitate to contact me.

Kind regards,

Jason Krzus
Senior Associate
Steve Watson and Partners Pty Ltd

Attachment 2