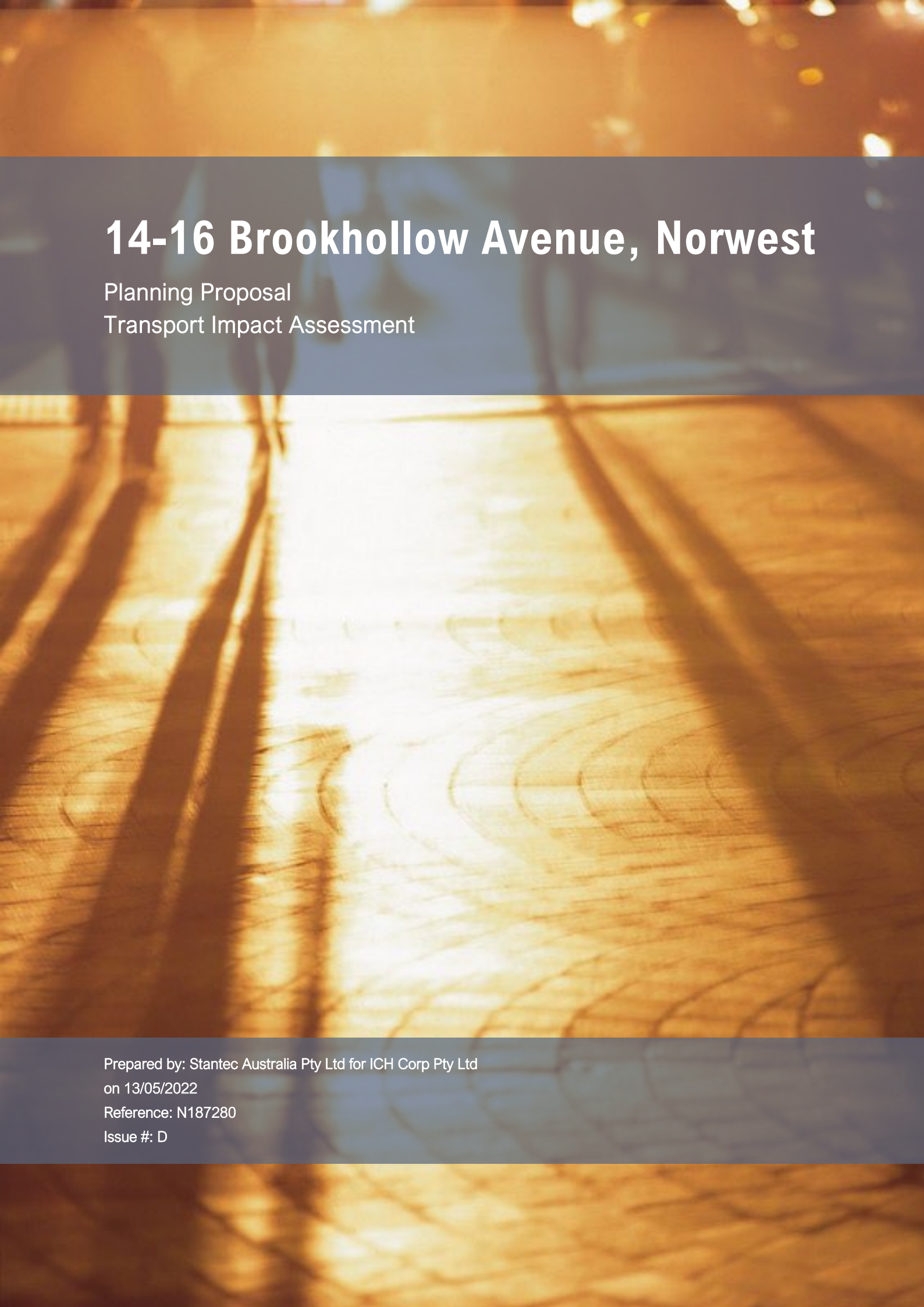

14-16 Brookhollow Avenue, Norwest

Planning Proposal
Transport Impact Assessment

Prepared by: Stantec Australia Pty Ltd for ICH Corp Pty Ltd
on 13/05/2022
Reference: N187280
Issue #: D

14-16 Brookhollow Avenue, Norwest

Planning Proposal
Transport Impact Assessment

Client: ICH Corp Pty Ltd

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Issue #: D

Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A	05/06/2020	Final	Jason Huang Mackenzie Brinums	Mackenzie Brinums	Rhys Hazell	Rhys Hazell
B	07/07/2020	Final – Updated	Jason Huang Mackenzie Brinums	Mackenzie Brinums	Rhys Hazell	Rhys Hazell
C	14/09/2021	Final – updated to reflect revised scheme	Mackenzie Brinums	Mackenzie Brinums	Rhys Hazell	Rhys Hazell
D	15/03/2022	Final – updated to address gateway determination	Mackenzie Brinums	Mackenzie Brinums	Rhys Hazell	Rhys Hazell
E	13/05/2022	Final – updated to TfNSW comments	Mackenzie Brinums	Mackenzie Brinums	Rhys Hazell	

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Figures

Tables

1. INTRODUCTION

01

1.1. Background

It is understood that a Planning Proposal is to be lodged with The Hills Shire Council for a proposed commercial development on land at 14-16 Brookhollow Avenue, Norwest. The proposed development incorporates two towers totalling around 17,539 square metres gross floor area (GFA) of commercial office space.

ICH Corp Pty Ltd engaged Stantec to complete a transport impact assessment to support the Planning Proposal for the site.

1.2. Purpose of this Report

This report sets out an assessment of the anticipated transport implications of the proposal, including consideration of the following:

- existing and planned transport services surrounding the site
- trip generating characteristics of the proposal
- pedestrian and bicycle considerations and requirements
- suitability of proposed parking in terms of supply and indicative layout
- suitability of future access arrangements for the precinct
- transports impact of the proposal on the surrounding network.

1.3. References

In preparing this report, reference has been drawn from a number of background sources, including:

- several inspections of the site and its surrounds
- The Hills *Local Environmental Plan* (LEP) 2012
- The Hills *Development Control Plan* (DCP) 2012
- The NSW Government's *Future Transport 2056 Strategy* 2018
- Greater Sydney Commission's *Our Greater Sydney 2056 Central City District Plan* 2018
- The NSW Government's Greater Sydney *Services and Infrastructure Plan* 2018
- The Hills Shire Council's *The Hills Corridor Strategy* 2015
- Australian Standard/ New Zealand Standard, Parking Facilities, Part 1: Off-Street Car Parking AS/NZS2890.1:2004
- Australian Standard, Parking Facilities, Part 2: Off-Street Commercial Vehicle Facilities AS2890.2:2018
- Australian Standard / New Zealand Standard, Parking Facilities, Part 6: Off-Street Parking for People with Disabilities AS/NZS2890.6:2009
- plans for the proposed development prepared by PBD Architects dated 13 September 2021
- other documents and data as referenced in this report.

2. STRATEGIC CONTEXT

02

2.1. Overview

The following key strategies and plans have influenced development opportunities in the strategic centre of Norwest and broader north-west growth area, together with real effects on future worker travel demand and mode splits.

A trigger for real growth in Norwest is the introduction of Sydney Metro, Australia's biggest public transport project which will ultimately operate as a standalone railway covering more than 66 kilometres with 31 new metro stations. Sydney Metro Northwest is the first stage of the project linking Rouse Hill and Chatswood via Norwest, Castle Hill and Epping with services having commenced in May 2019. Sydney Metro improves travel time, reliability and reduce costs compared with bus and private car travel to key employment areas including Macquarie Park, Chatswood, North Sydney and Sydney CBD.

Sydney Metro has greatly improved the 30-minute coverage for Norwest with commuters travelling as far east as Chatswood by public transport compared with the coverage in the past that only expanded to Castle Hill (within 30-minutes). The 30-minute coverage has also expanded for areas to the north and south of the metro line including towards Hornsby and Rhodes via The Northern heavy rail line.

2.2. Relevant Strategies and Plans

2.2.1. The NSW Government Future Transport 2056 Strategy

Future Transport 2056 provides a 40-year strategy for how transport will be planned, amended and forecasted within NSW, both regional and metropolitan, for the expected 12 million residents within the state. Future Transport 2056 follows from the 2012 Long Term Transport Master Plan which listed over 700 transport projects, the majority of which are completed or in progress. It also ties in with the Greater Sydney Region Plan and the subsequent district plans to support the three cities metropolis vision.

Future Transport 2056 is supported by two key documents, Greater Sydney Services and Infrastructure Plan and Regional NSW Services and Infrastructure Plan, which provide guidance and planning for these areas.

From a metropolitan view, Future Transport 2056 and associated plans include the 30-minute city where jobs and services are within 30-minutes of residents with Greater Sydney. Strategic transport corridors to move people and goods are outlined between metropolitan and strategic centres, clusters and surrounds. The Movement and Place framework is also emphasised to support liveability, productivity and sustainability.

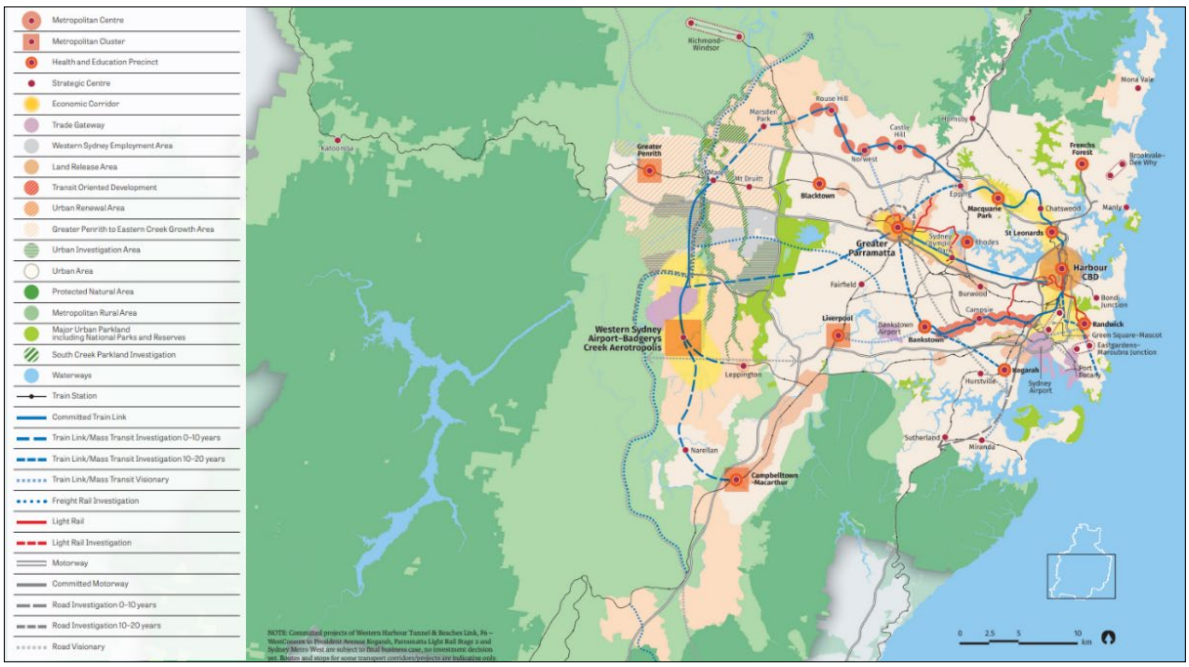
2.2.2. The Greater Sydney Region Plan 2018

The Greater Sydney Commission (GSC) is an independent organisation that leads metropolitan planning for Greater Sydney. It has been prepared the Greater Sydney Region Plan which outlines how Greater Sydney will manage growth and guide infrastructure delivery. The plan has been prepared in conjunction with the NSW Government's Future Transport 2056 Strategy and informs Infrastructure NSW's State Infrastructure Strategy.

The GSC's vision is to create three connected cities; a Western Parkland City west of the Westlink M7, a Central River City with Greater Parramatta at its heart and an Eastern Harbour City. By integrating land use, transport links and infrastructure across the three cities, more people will have access within 30-minutes to jobs, schools, hospitals and services.

The Greater Sydney Region Plan is a 20-year plan with a 40-year vision and has four key focuses; infrastructure and collaboration, liveability, productivity and sustainability. The Greater Sydney Structure Plan 2056 is shown in Figure 2.1 with Norwest highlighted on the Metro line and recognised as a strategic centre.

Figure 2.1: Greater Sydney Structure Plan 2056 – The Three Cities



Source: Greater Sydney Commission

2.2.3. Central City District Plan

The vision for Greater Sydney as a metropolis of three cities – the Western Parkland City, the Central River City and the Eastern Harbour City and a 30-minute city – means residents in the Central City District will have quicker and easier access to a wider range of jobs, housing types and activities as part of the overall transformation. The vision will improve the District's lifestyle and environmental assets.

The Central City District is the central and major component of the Central River City. The Central City District will grow substantially, capitalising on its location close to the geographic centre of Greater Sydney. Unprecedented public and private investment is contributing to new transport and other infrastructure leading to major transformation.

The Plan puts emphasis on developing the economy with jobs and skills growth from infrastructure investment. Norwest is identified as a strategic centre for urban growth with a balance of mixed-use development to allow new residents the opportunity to benefit from access and services provided within the centre.

New safe walking and cycling connections will be provided between parks, bushland, playgrounds and waterways. The Central District will be supported by cohesive and socially dynamic communities with new social infrastructure like schools and community services, new cultural and sporting facilities.

The Central City District is shown in Figure 2.2.

Figure 2.2: The Central City District

Source: Greater Sydney Commission, accessed 15 April 2020

2.2.4. Greater Sydney Services and Infrastructure Plan

Greater Sydney's population is forecast to grow from five million to eight million people over the next 40 years. To address the challenges and opportunities facing Sydney and the GSC's vision of a metropolis of three cities where people have access to jobs and services within 30-minutes by public transport, the Services and Infrastructure Plan was developed to plan for future transport in Sydney. Building on the Future Transport Strategy 2056, the Plan establishes specific transport outcomes for Greater Sydney and identifies policies, services and infrastructure initiatives to achieve these.

The plan puts emphasis on requiring more efficient modes of transport, specifically public transport, shared transport and walking and cycling. To support this, the NSW Government will invest in new transport links,

such as Sydney Metro, utilising existing capacity, designating road space for more efficient vehicles and ensuring the transport network sustains the liveability and sustainability of centres it passes through.

2.2.5. The Hills Corridor Strategy

With the introduction of Sydney Metro Northwest, over 50,000 new residents are expected to move to The Hills over the next 20 years. Council drafted the Hills Corridor Strategy to create a plan that creates a vision for the Shire's suburbs in the future.

The strategy looks specifically at measures to meet the future housing and employment growth expected for Cherrybrook, Castle Hill, Showground, Norwest, Bella Vista, Kellyville and Rouse Hill stations while maintaining sustainable and liveable suburbs.

The vision for Norwest is reproduced below:

"A specialised employment retail and entertainment centre with some opportunity for higher density residential living around the Norwest Lake Precinct"

The vision includes potential growth for approximately 5,650 dwellings and 26,200 jobs in Norwest, which is 2,200 dwellings and 16,050 jobs more than the planned growth under current controls.

3. SITE AND TRANSPORT CONTEXT

03

3.1. Site Context

The subject site is at 14-16 Brookhollow Avenue, Norwest within The Hills Shire Council local government area, approximately 10 kilometres north of the Parramatta CBD and 30 kilometres northwest of Sydney CBD. The site of approximately 6,700 square metres has a frontage of around 100 metres to Brookhollow Avenue along its northern boundary. The site is zoned as B7 – Business Park.

Norwest is undergoing extensive redevelopment with a range of residential and commercial developments either in planning or under construction. This includes Norwest Metro Station to the west of the site, with significant over-station development also forming part of a planning submission.

As discussed, Sydney Metro Northwest commenced services in May 2019 for commuters travelling between Schofields and Chatswood via Castle Hill and Epping. Services operate at four-minute frequencies during peak periods, vastly improving the level of public transport accessibility across northwest Sydney.

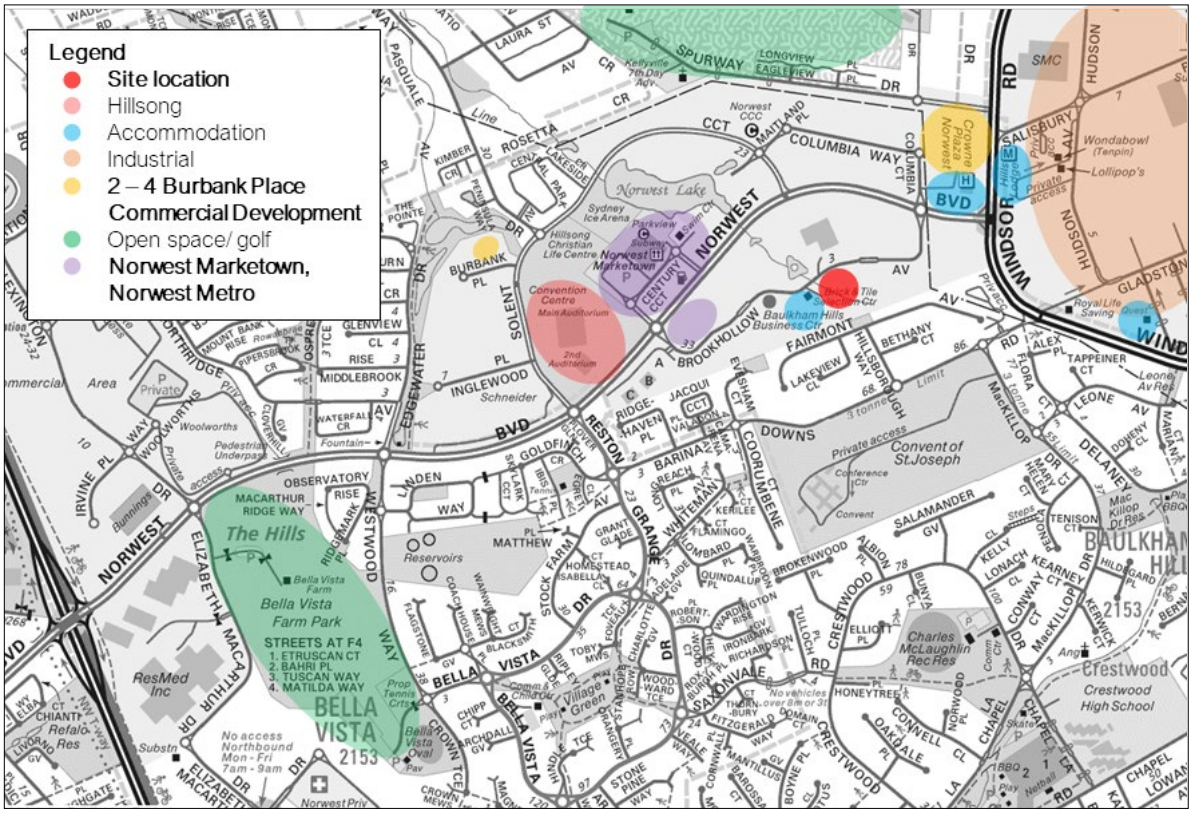
Norwest Marketown shopping centre is within an 800-metre walk to the north-west. It includes a Coles supermarket, pharmacy, business services and food offerings and is a key centre in the local area. Other existing and planned developments ensure a range of business, retail, restaurant and residential land uses deliver a diverse mix of activity within a commercial and increasingly residential precinct.

The location of the site and its surrounding environs is shown in Figure 3.1 and Figure 3.2. The walking catchments are shown in Figure 3.3.

Figure 3.1: Norwest aerial view

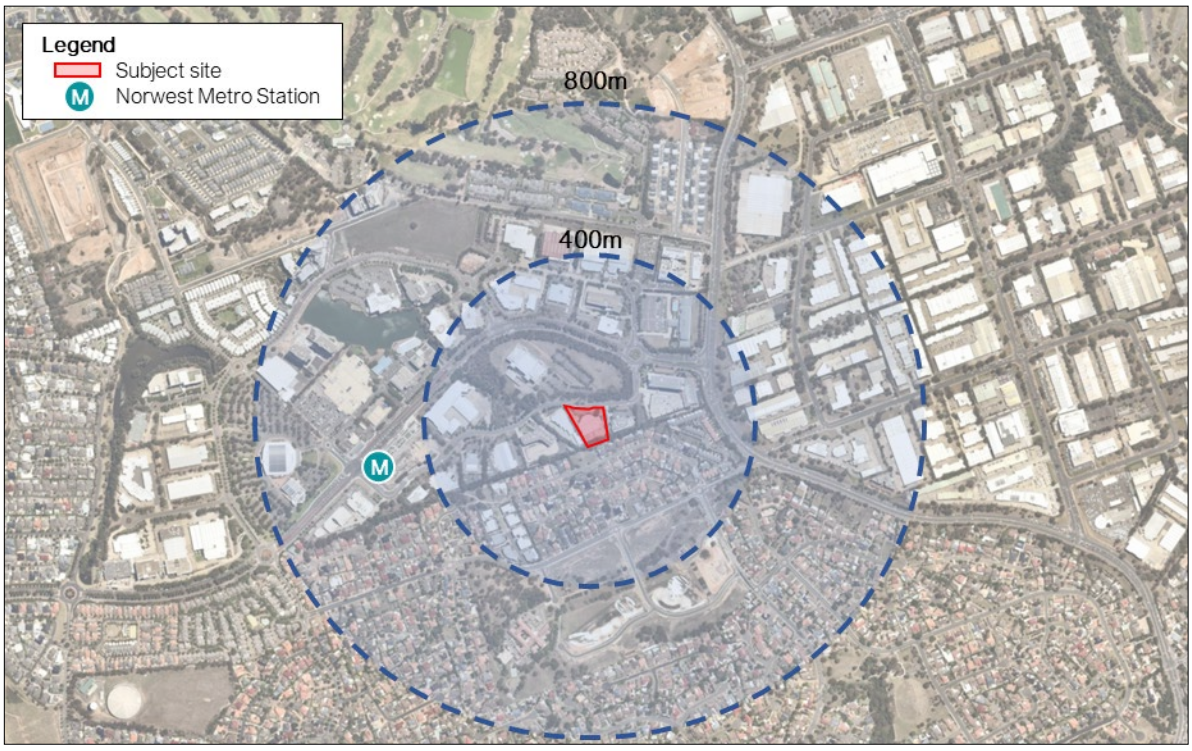
Base image source: Nearmap

Figure 3.2: Site location and surrounds



Base image source: Sydway

Figure 3.3: Site location and walking catchments



Base image source: Nearmap

3.2. Road Network

Roads are classified according to the functions they perform. The main purpose of defining a road's functional class is to provide a basis for establishing the policies which guide the management of the road according to their intended service or qualities.

In terms of functional road classification, State roads are strategically important as they form the primary network used for the movement of people and goods between regions, and throughout the State. Transport for NSW (TfNSW) is responsible for funding, prioritising and carrying out works on State roads. State roads generally include roads classified as freeways, state highways, and main roads under the Roads Act 1993, and the regulation to manage the road system is stated in the Australian Road Rules, most recently amended on 19 March 2018.

TfNSW defines four levels in a typical functional road hierarchy, ranking from high mobility and low accessibility, to high accessibility and low mobility. These road classes are:

Arterial Roads – Controlled by TfNSW, typically no limit in flow and designed to carry vehicles long distance between regional centres.

Sub-Arterial Roads – Managed by either Council or TfNSW under a joint agreement. Typically, their operating capacity ranges between 10,000 and 20,000 vehicles per day, and their aim is to carry through traffic between specific areas in a sub region or provide connectivity from arterial road routes (regional links).

Collector Roads – Provide connectivity between local sites and the sub-arterial road network, and typically carry between 2,000 and 10,000 vehicles per day.

Local Roads – Provide direct access to properties and the collector road system and typically carry between 500 and 4,000 vehicles per day.

The key roads surrounding the site include Brookhollow Avenue, Norwest Boulevard and Windsor Road, with a summary of the surrounding road network provided in Table 3.1.

Table 3.1: Surrounding road network

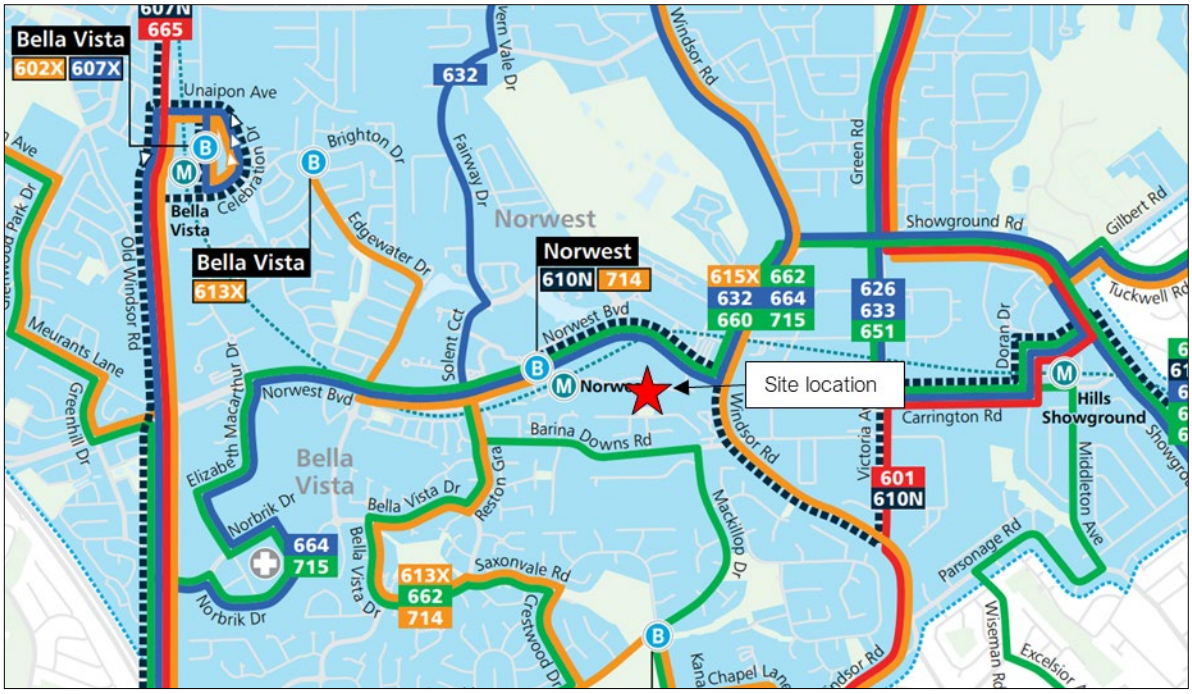
Road	Road classification and function	Characteristics
Windsor Road	State Road - Arterial Road	• North-south road travelling between Kellyville and Parramatta • Approximately 22m carriageway width with two through lanes and additional turning lanes in each direction near the site • 70km/h posted speed limit near the site • Parking not permitted on either side of the road
Norwest Boulevard	State Road - Collector Road	• East-west road travelling between Windsor Road and the Westlink M7 • 9m carriageway width in each direction with a central median separating the directions of travel • 70km/h posted speed limit • Parking permitted on both sides of the road however is not typical
Brookhollow Avenue	Local Council road	• East-west road connecting with Norwest Boulevard at both ends • 9m carriageway width • Single lane in either direction • 50km/h speed zoning in the vicinity of the site • Parking permitted on both sides of the road

3.3. Public Transport

3.3.1. Buses

The site is near several bus routes (613X, 632, 660, 662, 664, 714, 715, 730) which travel along Norwest Boulevard and combine to link the immediate area with the broader Hills LGA, Westmead, Parramatta and Sydney CBD via the Hills M2 Motorway. The surrounding extensive bus network is shown in Figure 3.4, with the closest bus stops located on Norwest Boulevard near Columbia Court and at Norwest Metro Station.

Figure 3.4: Surrounding bus network



Source: http://www.cdcbus.com.au/images/files/maps/hillsbus/Region_4_Network_Map.pdf accessed 15 April 2020

3.3.2. Sydney Metro

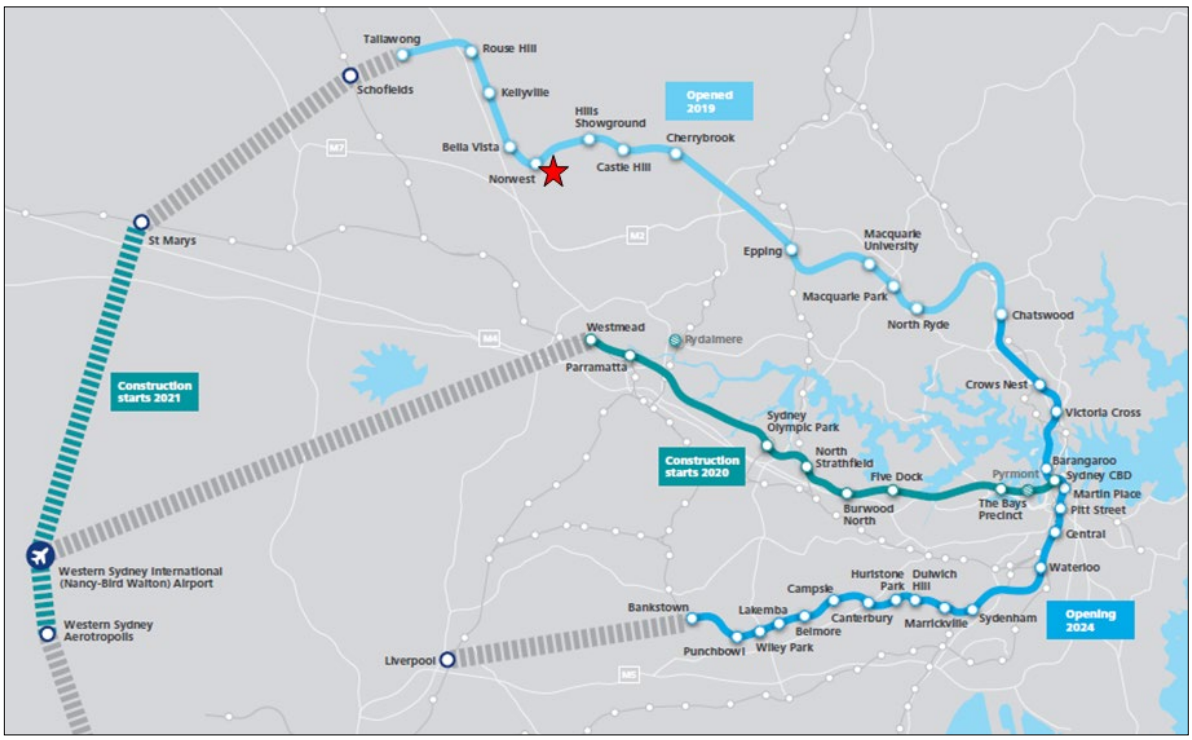
Stage 1 of Sydney Metro Northwest extends from Tallawong Station, Schofields to Chatswood. Stage 2 of Sydney Metro will extend south from Chatswood, through Crows Nest and North Sydney under Sydney Harbour via new underground station precincts within the CBD and stretching through the existing heavy rail line to Bankstown.

Sydney Metro Northwest has delivered eight new railway stations and 4,000 commuter car parking spaces to Sydney's growing Northwest. Trains run every four minutes in the peak; that is 15 trains an hour operating as a walk up 'no timetable' service. With metro services already running, ongoing planning for the site includes an over-station mixed-use development comprising commercial and hotel towers.

As discussed, Sydney Metro will improve accessibility and travel time to other key employment areas including Macquarie Park, Chatswood, North Sydney and Sydney CBD as well as providing rapid connection to residential areas in northwest Sydney, creating opportunities to change travel behaviour for existing and future workers.

An overview of the Sydney Metro route alignment is shown in Figure 3.5.

Figure 3.5: Sydney Metro route alignment



Source: Sydney Metro (sydneymetro.info)

3.4. Pedestrian and Cycle Access

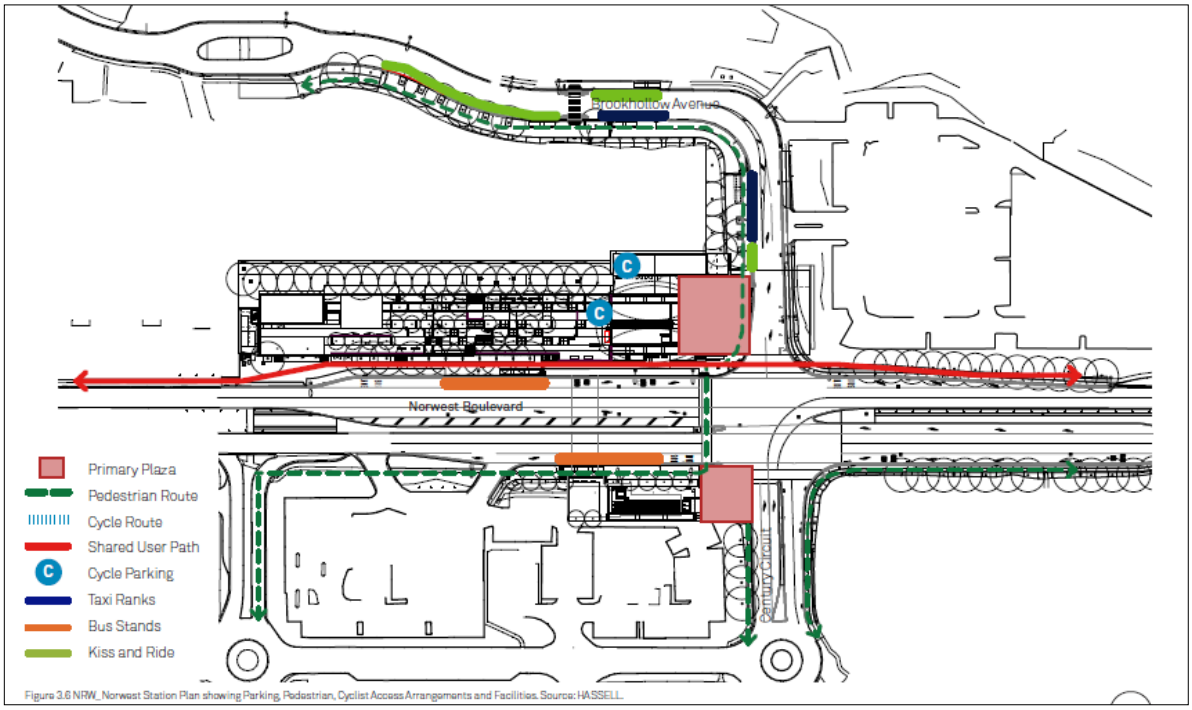
3.4.1. Pedestrian Amenity

The introduction of Sydney Metro has greatly improved pedestrian amenity in Norwest, including the environment along Norwest Boulevard and Brookhollow Avenue. A range of initiatives form part of the metro station delivery and enhances the connectivity in the immediate vicinity. These include the following transport and design facilities:

- Norwest Boulevard/ Brookhollow Avenue intersection (western end of Brookhollow Avenue) upgrades from roundabout to traffic signals with formal pedestrian crossings
- kiss and ride facilities and taxi rank on Brookhollow Avenue
- bus stops on Norwest Boulevard, adjacent to the metro station
- pedestrian link under Norwest Boulevard to improve access and safety between the metro station and bus stops and Norwest Marketown
- open forecourts and plaza areas.

The layout of the Norwest Metro Station precinct in shown in Figure 3.6.

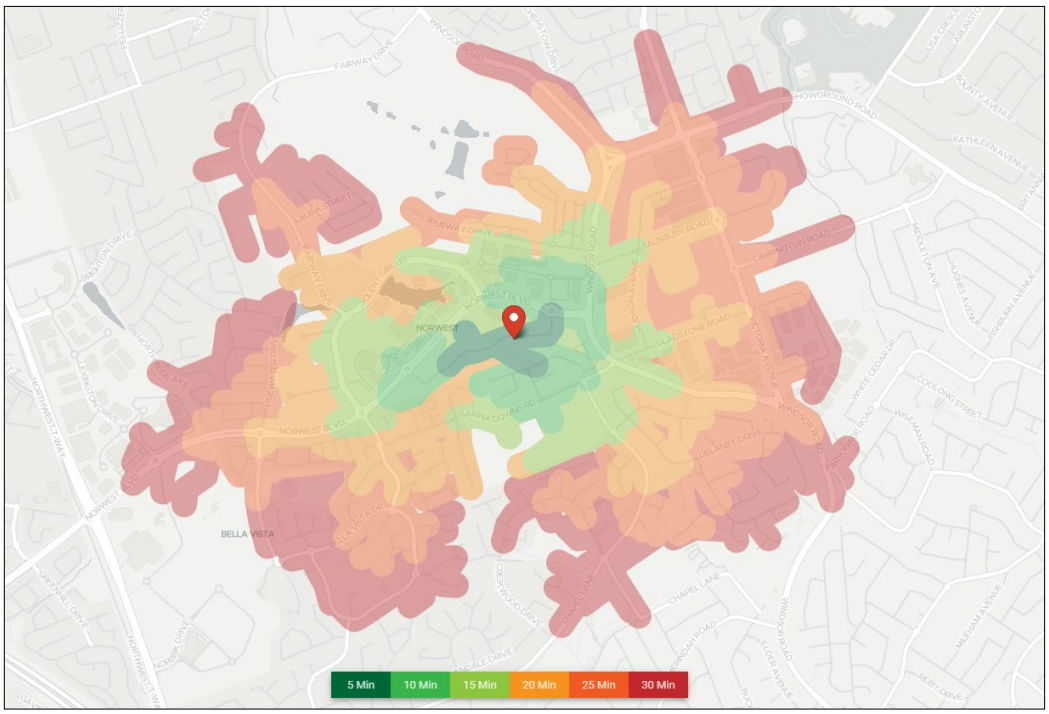
Figure 3.6: Norwest Metro Station precinct



Source: Sydney Metro (https://www.sydneymetro.info)

The existing walking catchment from the site is shown in Figure 3.7 and illustrates both existing connectivity throughout Norwest and identifies areas of opportunity to continue to promote walking as a mode a travel to/ from the local area.

Figure 3.7: Walking catchment map

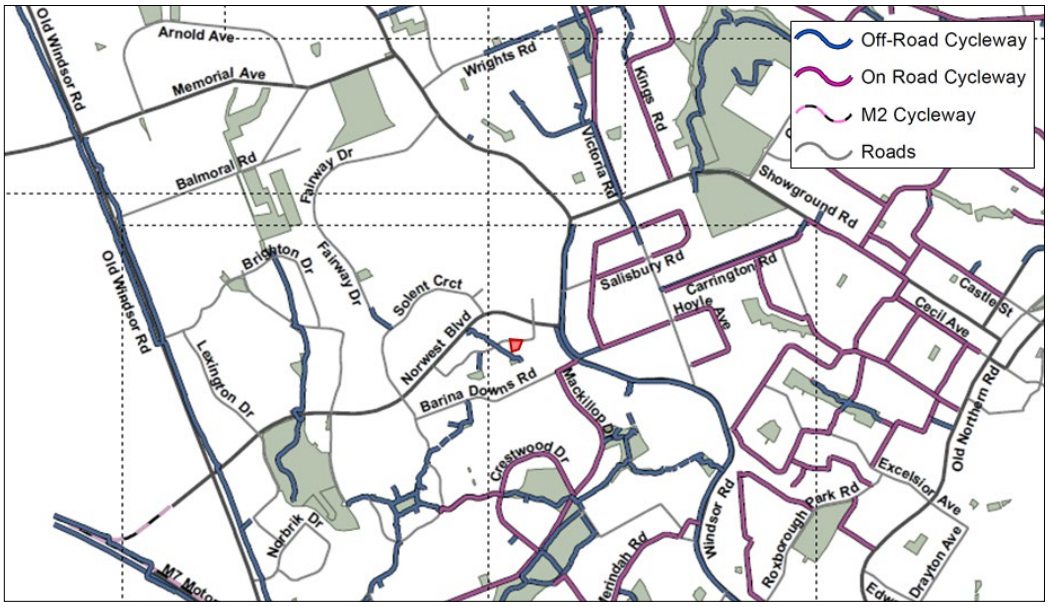


Source: https://app.targomo.com/demo/, accessed 15 April 2020

3.4.2. Cycling Facilities

Figure 3.8 highlights the network of cycling routes within the local and regional area. Cycling infrastructure is generally limited through the local area, evidenced by the absence of an east-west path between Windsor Road and Old Windsor Road. Alternative off-road cycleways south of the site combine to allow a level of amenity however their remains opportunity for improvements.

Figure 3.8: Existing cycling routes



Base image source: The Hills Shire Council website, accessed 15 April 2020 (www.thehills.nsw.gov.au)

Given the changing nature of Norwest, it is expected that cycling facilities will be expanded to improve connectivity to Metro stations from surrounding existing and future mixed use, commercial and residential areas. The lack of cycling facilities is recognised in the Sydney Metro Northwest Pedestrian and Cycle Strategy[1] with recommendation for separated paths on Norwest Boulevard and north-south links for delivery by others. The recommendations are summarised in Figure 3.9.

[1] Sydney Metro Northwest - Pedestrian and Cycle Strategy, Transport for NSW, July 2015

Figure 3.9: Norwest Station pedestrian and cycling recommendations

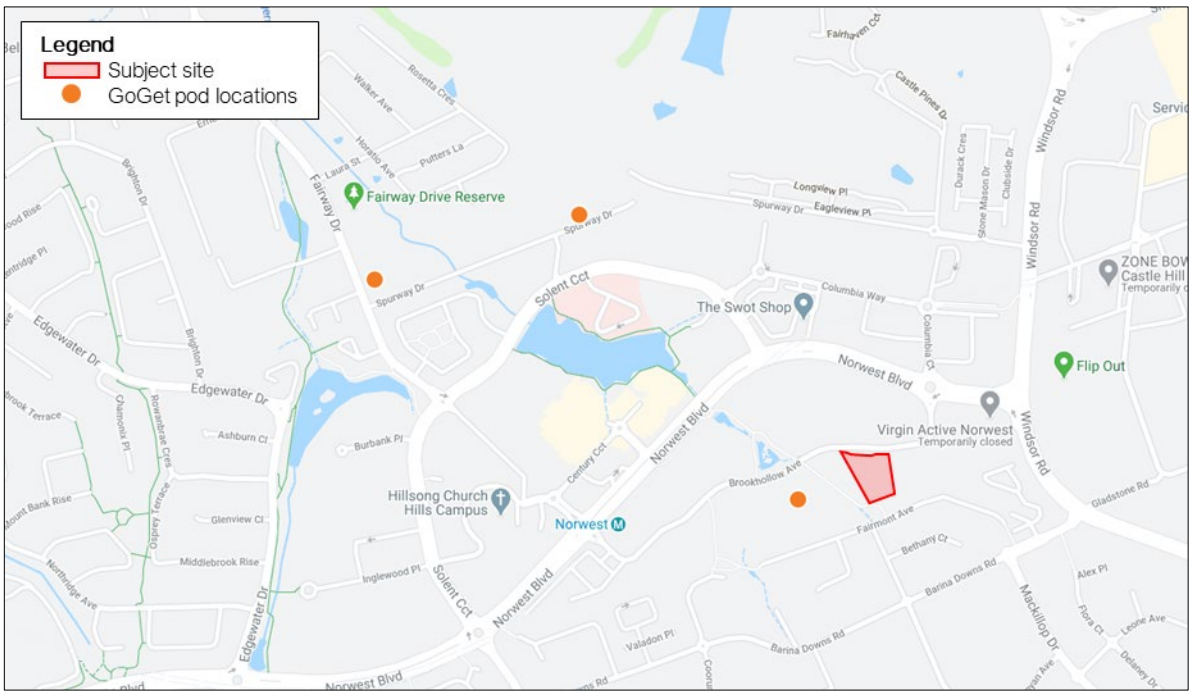
Base image source: www.sydneymetro.Ped-Cycle-Strategy

3.5. Local Car Sharing Initiatives

Car share schemes have become increasingly common throughout Sydney and are now recognised as a viable transport option for drivers throughout Sydney. They offer a viable alternative to the private car for trips where distances are short and are likely to be of benefit to future tenants of the proposed development. Whilst car share is in relative infancy in the local and regional area, they will form an integral part of the ongoing transformation of Norwest.

GoGet car share does have select car share pods close to the site, shown in Figure 3.10. The closest pod is within the Adina Apartments on Brookhollow Avenue, west of the site.

Figure 3.10:GoGet car share pods



Base image source: GoGet, accessed 15 April 2020 (www.goget.com.au)

4. PLANNING PROPOSAL

04

4.1. Overview

The planning proposal seeks to facilitate redevelopment of the site to accommodate a commercial development comprising 17,539 square metres of commercial GFA and 234 car parking spaces over four levels of parking. The design concept proposes a built form ranging between six and 10 storeys including a one storey podium.

The proposed ground floor plan is shown in Figure 4.1.

Figure 4.1: Indicative ground floor plan

Source: 14-16 Brookhollow Avenue, Norwest - Planning Proposal Report, PBD Architects, September 2020

A single vehicle access is proposed on Brookhollow Avenue in the north-west corner of the site. The access would connect with the upper basement car parking level that includes a single loading dock designed to accommodate vehicles up to 8.8 metre medium rigid vehicles.

The proposal includes a high level of pedestrian amenity and public domain space particularly towards the northern end of the site. It also considers the existing pedestrian path which runs between Fairmont Avenue and Brookhollow Avenue to the west of the site.

5. SUSTAINABLE TRANSPORT ASSESSMENT

05

5.1. Active and Public Transport

The planning proposal provides convenient movement of people through the site, with the site design taking advantage of connecting with existing pedestrian infrastructure surrounding the site including along the southern side of Brookhollow Avenue and the footpath between Fairmont Avenue and Brookhollow. Formal crossing points are provided along Brookhollow Avenue to facilitate future employees and aiding connections with Norwest Metro Station. This includes the pedestrian refuge adjacent to 18-20 Brookhollow Avenue, the marked pedestrian (zebra) crossing adjacent to 30 Brookhollow Avenue and the signalised pedestrian crossings at the Norwest Boulevard/ Brookhollow Avenue signalised intersection (western end of Brookhollow Avenue).

The site is a 600-metre walk from Norwest Metro station and associated bus facilities that will conveniently connect employees throughout the Hills District and broader Sydney. With Sydney Metro greatly increasing the coverage and convenience to access the Greater Sydney region, there will be a natural reduced reliance on private car use which is a fundamental aspect of employment growth in the area.

These estimated peak hour trips would likely equate to less than 30 people on any new metro train and individual bus service. Future public transport services will be capable of accommodating significant volumes of people during peak periods including the increase in public transport trips generated by the proposal.

Norwest on demand bus services also operate in the area. The services are run by CDC Hillbus MetroConnect with the on-demand buses picking up customers from an agreed point and travel between Norwest Station, Bella Vista Station and Hills Showground Station, making it easier to connect with the Sydney Metro. It operates during weekday peaks between 6am and 10am, and between 4pm and 9pm. Cost varies and depends on distance travelled.

5.2. Bicycle Parking and Associated Facilities

The bicycle parking requirements for commercial developments are set out in DCP 2012. The DCP recommends bicycle parking be provided at a rate of two spaces, plus five per cent of the total car parking spaces for commercial and retail uses. Considering the proposed indicative 234 on-site parking spaces, the site would require 14 bicycle parking spaces.

Notwithstanding, to facilitate the desire for workers and visitors to make regular use of more sustainable and active travel modes, it is recommended that bicycle parking be provided at a rate of one space per 200 to 300 square metres GFA. Bicycle parking should be provided in secure area for use by employees, while any visitor bicycle parking should be provided in the public domain to encourage use.

The recommended bicycle rate has been determined with consideration to commercial rates adopted in other Council DCPs, as summarised in Table 6.1. The recommended rate is considered appropriate for the planning proposal without representing an oversupply in an area that currently has a low active travel mode share.

Table 5.1: Comparison of DCP commercial bicycle parking requirements

Council	Commercial Rate
The Hills	2 + 5% of car parking supply
Parramatta	1 space per 200sqm
Canada Bay	1 space per 200sqm for staff plus 1 space per 750sqm for visitors
North Sydney	1 space per 150sqm for staff plus 1 space per 400sqm for visitors
Sydney	1 space per 150sqm for staff plus 1 space per 400sqm for visitors

Based on the rate of one bicycle space per 200 to 300 square metres, it is recommended that the proposal include between 59 and 88 bicycle parking spaces. Appropriate end of trip facilities including showers and lockers for the commercial uses would be incorporated into the proposal as part a future development application.

5.3. Travel Demand Management Initiatives

Transport is a necessary part of life, but it has economic, public health and environmental consequences. The transport sector is one of the fastest growing emissions sectors in Australia, and therefore is one of the key opportunities for reducing greenhouse gases. As well as delivering better environmental outcomes, providing a range of travel choices with a focus on walking, cycling and public transport will have major public health benefits and will ensure a strong and prosperous community.

The physical infrastructure being provided as part of the development is only part of the solution. A green travel plan (GTP) will ensure that the transport infrastructure, services and policies both within and external to the site are tailored to the users and co-ordinated to achieve the most sustainable outcome possible.

A GTP is a package of measures aimed at promoting sustainable travel and reducing reliance on private vehicles. It is not designed to be 'anti-car', however aims to encourage and support people's aspirations for carrying out their daily business in a more sustainable way. Travel plans can provide measures to:

- Restrict car use (disincentives or 'sticks').
- Encourage or support sustainable travel, reduce the need to travel or make travelling more efficient (incentives or 'carrots').

A site specific GTP would promote more sustainable and environmentally friendly travel choices for employees. As discussed, there will be a range of "non-car" transport options available near the site, specifically Sydney Metro.

The key objectives of GTPs are to:

- to encourage walking
- to encourage cycling
- to encourage the use of public transport
- to reduce the use of the car, in particular single car occupancy
- encourage more efficient use where it is necessary to use the car.

It is the intention therefore that the travel plan will deliver the following benefits:

- enable higher public and active travel mode share targets to be achieved
- contribute to greenhouse gas emission reductions and carbon footprint minimisation

- contribute to healthy living for all
- contribute to social equity and reduction in social exclusion
- improve knowledge and contribute to learning.

The following potential measures and initiatives could be implemented to encourage more sustainable travel modes:

1. Limiting on-site parking provision.
2. Provide a Travel Access Guide (TAG) which would be provided to all residents and staff and publicly available to all visitors. The document would be based on facilities available at the site and include detail on the surrounding public transport services and active transport initiatives. The TAG would be updated as the surrounding transport environment changes.
3. Providing public transport information boards/ apps to inform staff and visitors of alternative transport options (the format of such information boards would be based upon the TAG).
4. Providing a car sharing pod(s) on-site or nearby and promoting the availability of car sharing pods for trips that require the use of private vehicles.
5. Providing bicycle facilities including secure bicycle parking for staff, bicycle racks/ rails for visitors and shower and change room facilities.
6. Encouraging staff that drive to work to carpool through creation of a carpooling club or registry/ forum.
7. Regularly promoting ride/ walk to work days.
8. Providing a regular newsletter to all staff members bringing the latest news on sustainable travel initiatives in the area.

With the successful implementation of a Green Travel Plan, there is a real opportunity to realise mode share targets and potentially exceed targets for non-car-based trips. This specifically includes single occupancy car trips given the site's key location near Norwest Metro Station.

6. PARKING AND LOADING ASSESSMENT

06

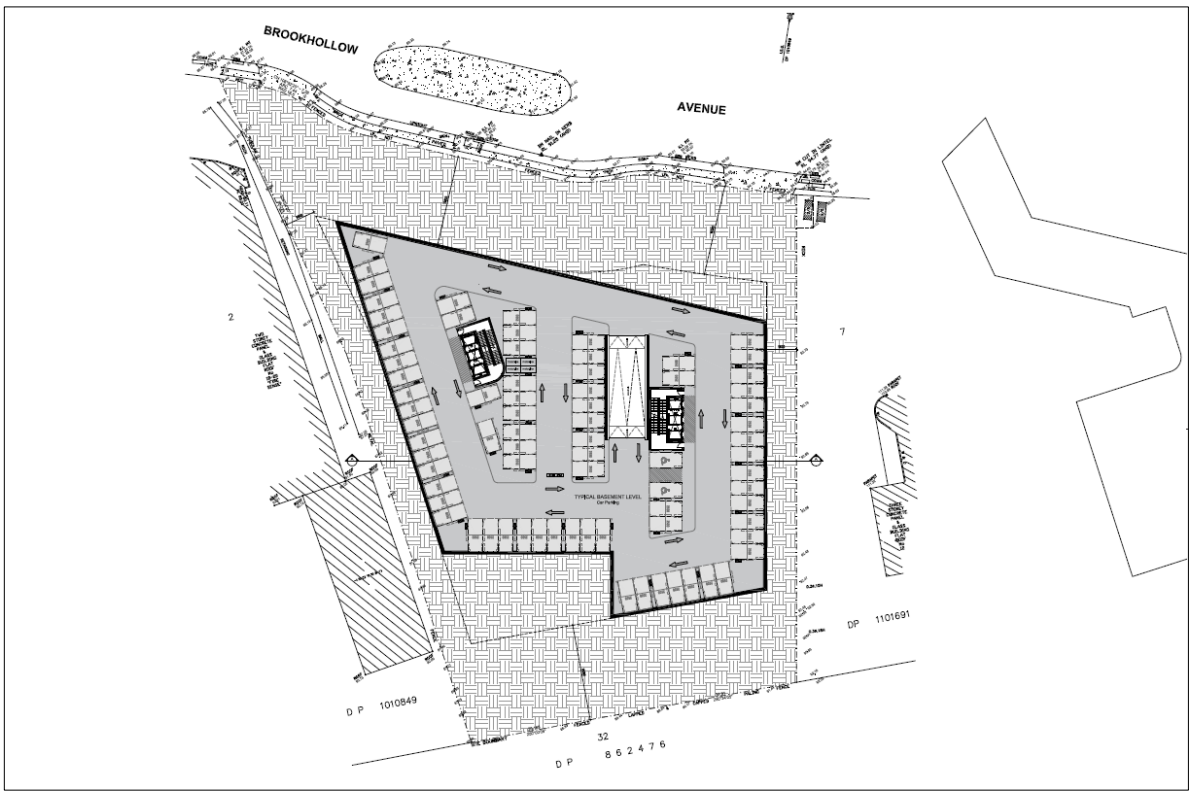
6.1. Overview

The proposal incorporates around 234 parking spaces across four basement levels. The indicative basement car park layout shown in Figure 6.1.

Figure 6.1: Indicative lower ground floor layout

Source: 14-16 Brookhollow Avenue, Norwest - Planning Proposal Report, PBD Architects, September 2020

Figure 6.2: Indicative typical basement layout



Source: 14-16 Brookhollow Avenue, Norwest - Planning Proposal Report, PBD Architects, September 2020

6.2. Car Parking

The car parking requirements for different development types are set out in DCP 2012. Based on the proposed commercial GFA of 17,539 square metres and the applicable parking rate of one space per 40 square metres for commercial centres, the proposal is required to provide 438 spaces. This parking provision is considered excessive for several reasons though especially considering the proximity to Norwest metro station and the future vision for the surrounding area as a key employment precinct.

As such, a review of commercial/ office rates applicable for other employment centres around Sydney, and in some cases where rail services are more established, is included in Table 6.1.

Table 6.1: Comparison of relevant commercial/ office parking rates

Source	Commercial/ Office Rate
Bella Vista Station Precinct (within 400m of station)	1 space per 80sqm
Ryde (Macquarie Park Corridor)	1 space per 100sqm
Parramatta CBD (incl. Parramatta Square)	1 space per 100sqm (max.) [1]
Green Square precinct	1 space per 125sqm (max.)
Rhodes revised Draft Precinct Plan	1 space per 150sqm (max.)
Average	**approx. 1 space per 110sqm**

[1] Parramatta LEP also understood to be updated to include a calculated rate, same as City of Sydney for sites with an FSR greater than 3.5:1. For sites less than that, the applicable rate is one space per 175m^2.

Table 6.1 illustrates that other key comparable employment centres allow significantly lower commercial parking rates when compared with The Hills DCP 2012. The Hills DCP parking rate is not considered sustainable for future development in Norwest with the proposed vision for Norwest being a strategic centre and does not encourage a mode shift towards more sustainable modes of travel. Specific to the site, 14-16 Brookhollow Avenue is less than a 600-metre walk from Norwest Station and justifiably triggers consideration for parking to be provided at a rate that accurately reflects its location, the expanding metro services across Sydney and changing demographics of the area more broadly.

It is understood that Council recognises the significant change in the travel behaviour within the Sydney metro precincts and is of the view that a reduced parking rate in the range of between one space per 60 and one space per 80 square metres would be appropriate for Norwest at present. TfNSW has historically held the view of seeking to appropriately reduce on-site parking as much as practical and has recommended a parking rate of one space per 75 square metres. Application of this rate would result in a parking provision of 234 spaces for the planning proposal.

The planning proposal includes provision of 234 on-site parking spaces, ensuring an appropriate quantum of parking is delivered and strikes a good balance between current DCP parking rates, other established and comparable employment precincts across Sydney and the changing demographics of Norwest.

6.3. Accessible Car Parking

DCP 2012 requires two per cent of the total parking supply to be accessible spaces. Based on the proposed 234 spaces, five spaces are required to be accessible the details of which will be included at the development application stage.

6.4. Motorcycle Parking

DCP 2012 requires motorcycle parking to be provided at a rate of one space per 50 car parking spaces for developments with over 50 car parking spaces. Based on 234 parking spaces, five motorcycle spaces are required and will be documented as part of a future development application.

6.5. Loading and Servicing

Stantec's experience with calculating loading requirements for new large-scale commercial developments have shown the DCP 2012 and TfNSW Guide 2002 rates generally result in an excessive recommended loading dock provision.

For commercial tenancies, deliveries are typically by small delivery vehicles (mostly 6.4 metre small rigid trucks, vans, utes etc.) unless there is a tenancy turnover or delivery of large furniture and appliances. Deliveries are typically couriers, postal, some food and other day-to-day commercial business-related activity. All are generally infrequent.

Based on similar developments, waste collection may be in the order of five trucks per week.

Based on the above, the development could expect up to five service vehicle deliveries per day that require access to the loading dock. Based on this, it is anticipated that the proposed single loading bay would be sufficient to service the site. Swept paths indicate that an 8.8m medium rigid truck will be able to adequately service the site.

7. TRAFFIC ASSESSMENT

07

7.1. Traffic Generation

Traffic generation estimates for the proposal have been sourced from the TfNSW Guide to Traffic Generating Developments 2002 (the Guide) and Technical Direction: Updated Traffic Surveys (TDT 2013/ 04a).

Considering the site's proximity to Norwest Metro Station and future transport aspirations across the broader precinct as well as the proposed reduced parking provision in relation to commercial GFA, a trip generation rate of 0.6 trips per space in the AM peak hour and 0.5 trips per space in the PM peak hour has been adopted for this assessment. This is slightly lower than the Sydney sites average referenced in the TDT 2013/ 04a (0.69 and 0.53 trips per space respectively) and closely aligned with the Sydney Olympic Park site (0.56 and 0.53 trips per space respectively), noting that Norwest has superior bus and rail transport options than Sydney Olympic Park.

The adopted rates are still appropriately higher than other sites around Sydney including North Sydney, Chatswood and Parramatta, as these areas are more established centres with lower car parking requirements (average of 0.38 and 0.25 trips per space respectively).

Based on the above rates and the proposed parking provision of 234 spaces, it is expected that the site will generate 140 and 117 vehicle trips in the AM and PM peak hours respectively.

7.2. Distribution and Assignment

The directional distribution and assignment of traffic generated by the proposal will be influenced by several factors, including the:

- configuration of the arterial road network in the immediate vicinity of the site
- existing (and future) operation of intersections providing access between the local and arterial road network
- surrounding employment centres, retail centres and schools in relation to the site
- likely distribution of employee's residences in relation to the site
- configuration of access points to the site.

Having consideration to the above, and based on the local knowledge of the area, it is an appropriate assumption to assume 50 per cent of traffic travelling to/ from the east (Windsor Road) and 50 per cent travelling to/ from the west (Norwest Boulevard, Westlink M7, Old Windsor Road).

These intersections are expected to carry between 59 and 70 additional vehicle trips, with between 47 and 56 vehicles in the peak direction based on an 80:20 split in the direction of travel. When existing traffic volumes generated by the site are removed, the net increase in traffic is not expected to materially impact the surrounding road network. Overall, less than 30 additional vehicle trips are expected at these intersections as a result of the proposal. This equates to around one vehicle trip every two minutes during any peak hour.

7.3. Traffic Impact

7.3.1. Road Network

The introduction of Sydney Metro to Norwest and the greater northwest Sydney region is likely to continually shift travel behaviour of both existing and future workforce. This will result in a significant shift in traffic congestion that has been a common issue in the area for several years.

It is worth also noting that with more residents and mixed-use developments in the area, the very much 'tidal' flow of traffic in the peak direction will weaken over time. Less reliance on travel by private vehicle will also further benefit future traffic conditions.

It is widely recognised that existing traffic conditions through Norwest (and Bella Vista, Castle Hill, etc.) are not representative of future conditions. The upgrades at the Norwest Boulevard/ Brookhollow Avenue intersection from a roundabout to traffic signals has also altered how traffic moves through the area. Pedestrian amenity has also improved with provision of formal and safe crossing points in an area that has long been dominated by the car. Based on this, assessing the traffic generation of the planning proposal against the current transitional period conditions would not provide meaningful results to inform future traffic conditions. It is also important to consider all other planned and future growth in the area as part of any traffic study.

It is also recognised that strategic traffic modelling is currently being completed for Norwest (and other surrounding centres) as part of Sydney Metro with this to capture future growth and traffic conditions generally. Such modelling is key and allowing the precinct to develop over time in an environment in which metro services and other targeted transport initiatives will transform how people move. Such change will take time and as such, agreement on the timing and extent of any such site-specific traffic modelling (if any) can be confirmed as part of a future DA.

7.3.2. Site Access

Brookhollow Avenue includes irregular central medians along its length with one located adjacent to the site frontage. Based on the above analysis, it is expected that the morning peak hour would be the critical peak for the site access, with up to 40 vehicles turning right into the site. Considering existing traffic volumes on Brookhollow Avenue and the function of the road, it is expected that the site access would operate well with minimal delay. There are adequate sight distances along the frontage of the site, having regard for the speed environment and existing road environment. The site access arrangements are consistent with all other commercial buildings in the surrounding area.

8. SUMMARY

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SUMMARY

Based on the analysis and discussions presented within this report, the following conclusions are made:

1. A planning proposal is to be lodged for the development at 14-16 Brookhollow Avenue, Norwest which incorporates around 17,539 square metres GFA of commercial space across two towers.
2. The proposal supports to future vision for the surrounding area as a mixed-use precinct, with several other developments currently in planning or under development following the introduction of Sydney Metro.
3. The planning proposal looks to provide supporting commercial land uses to support future housing growth in the surrounding growth precinct and encourage trip containment in the surrounding Norwest area.
4. The parking requirements in the existing planning controls for the site are high and do not take into consideration the significant improvements in public transport provision surrounding the site. This includes Metro service and on demand buses.
5. An empirical assessment has been completed based on the requirements for other similar precincts around Sydney which indicated that a reduced parking rate in the range of between one space per 60 and one space per 80 square metres would be appropriate for Norwest at present.
6. TfNSW has historically held the view of seeking to appropriately reduce on-site parking as much as practical and has recommended a parking rate of one space per 75 square metres.
7. The planning proposal includes a provision of 234 spaces, equating to the rate of one space per 75 square metres and is considered appropriate.
8. A minimum of five accessible spaces and five motorcycle spaces would be required for the development, in accordance with DCP 2012 requirements.
9. The site access arrangements are appropriate and able to accommodate the anticipated peak traffic volumes.
10. The proposed parking layout is considered generally consistent with the dimensional requirements as set out in the Australian/New Zealand Standard for Off Street Car Parking (AS/NZS2890.1:2004 and AS/NZS2890.6:2009) and would be developed further as part of any future development application.
11. It is recommended that the development provide between 59 and 88 bicycle spaces consistent with higher bicycle provision requirements for other councils considering the future vision for the surrounding precinct and to further encourage a mode shift towards active travel. This would be supported by high quality end-of-trip facilities and lockers.
12. The provision of pedestrian and active travel facilities to link the site with the surrounding area is expected to be of benefit and provide for improved pedestrian amenity and connectivity throughout.
13. Loading and servicing will occur on-site and within the basement with allowance for all vehicles up to 8.8-metre-long medium rigid trucks. Demand is expected to be low with around five service vehicle deliveries per week.
14. The site is expected to generate up to 140 and 117 vehicle trips in the AM and PM peak hours respectively.
15. Existing traffic conditions in Norwest are in transition and not representative of future conditions. As such, an assessment based on current conditions and intersection configurations would not provide meaningful results to inform the planning proposal.
16. It is understood that transport agencies are in the process of completing traffic modelling for the precinct to better understand future traffic conditions, with the applicant and other landowners also committed to collaboration in this regard.

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