EG Funds Management

Sumer Hill Flour Mill

Infrastructure and Traffic Management Plan

001

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Contents

1 Introduction

EG Funds Management commissioned Arup in 2012 to undertake a traffic and parking study for the development of the Summer Hill Flour Mill (SHFM) site (also known as the Allied Mills site). The site, located at 2-32 Smith Street, Summer Hill NSW, is proposed to be redeveloped for mixed use purposes, including largely residential use and ancillary retail and commercial uses. A transport assessment was previously undertaken for all modes of access to support a Planning Proposal to Ashfield and Marrickville councils to rezone the site.

Reference is made to previous transport assessments that were undertaken for SHFM development. These reports were prepared as part of the Concept Plan (MP_0155) and Project Application (MP_0180) for Part 3A. The Director-General of the NSW Department of Planning (DoP) accepted the project under Part 3A of the Environmental Planning and Assessment Act 1979 (EPA Act). These reports were prepared as a Transport Management and Accessibility Plan (TMAP) in 2011 and a Preferred Project Report (PPR) in 2012.

The development will be constructed in four stages. This report addresses the external infrastructure and traffic management works that will be delivered by the development in each of these stages.

2 Proposed Stages of Development

2.1 Overview

The intended staging of the development, shown in Figure 1, commences with predominantly residential development on the corner of Edward Street and Smith Street. The Stage 1 boundary includes a public access route to the future light rail platforms and to the McGill Street Precinct beyond.

Figure 1 Indicative Development Staging Plan

The development mix for the four indicative stages is shown in Table 1. Stages 1 and 2 are small stages with 44 and 23 apartments/terrace houses respectively and minimal associated commercial and retail floor space. Stage 3 is the largest stage involving the reuse of the mill buildings and Stage 4 is the remaining new build in the north east corner of the site.

Table 1 Development Split for Indicative Staging

Stage	Residential Apartments					Commercial (GLA m2)	Retail (GLA m2)
	1bed	2bed	3bed	3/4 bed terrace	Total		
1	3	29	8	4	44	0	443
2	6	12	0	5	23	110	110
3	66	57	9	2	134	3,300	1,110
4	12	34	19	10	75	0	191
Total	87	132	36	21	276	3,410	1,854

(Note that final numbers for subsequent stages after Stage 1 will be confirmed in the development application for each stage)

Staging of the road and public domain works has been considered based on the development mix. As Stages 1 and 2 are small stages, this will add minimal traffic to the road system. The roundabout would be installed at the intersection of Smith Street and Edward Street to facilitate local circulation. The remainder of the works are triggered by Stage 3, which is the largest stage of works.

Applying traffic generation rates to Stage 1 and Stage 2, results in a traffic generation of 50 vehicles movements in and out in the peak hours. This low level of traffic generation can be accommodated on the local road system with the existing arrangements.

2.2 Stage 1

The Stage 1 development includes the internal road connection between Edward Street and Smith Street with a left turn in and left turn out restriction at Smith Street. The proposed roundabout at the intersection of Edward Street and Smith Street would therefore be installed in Stage 1 to allow for local vehicle circulation. These works are detailed in Section 3.2 of this report.

The roundabout works will also permit the installation of a median on Smith Street to restrict the movements into the internal road on Smith Street. These works are detailed later in the report in Section 3.1.

Staging of the public domain upgrade works identified for pedestrians and cyclists is dependent on prioritisation by each Council. A number of pedestrian and cyclist improvement works as identified in the PPR Report have been proposed during this stage. These works are detailed in Section 3.4.

2.3 Stage 2

During the Stage 2 development, there are minimal proposed increases to commercial/retail floor space or residential units. The works during Stage 1 will cater for the increases during this stage. Due to these factors, no further road works are required during this stage.

2.4 Stage 3

Stage 3 is the largest stage of the works. This stage will trigger the upgrade of the Edward Street / Old Canterbury Road intersection to traffic signals. This intersection upgrade will require associated civil works on the surrounding approaches. It is recommended that the traffic signals at the intersection of Edward Street and Old Canterbury Road be operational prior to occupation of Stage 3 of the development. These works are further detailed in Section 3.3 of the report.

2.5 Stage 4

The construction during this stage proposes another new internal road connecting into Stage 4. This will trigger a central median opposite the new internal road on Smith Street. This is mentioned in Section 3.1 of the report.

3 Detailed Transport Improvements

3.1 Traffic Management and Central Medians

3.1.1 Central Medians

A proposed median tree planting and narrow street layout as shown in Figure 2 will create a slow speed environment and safe pedestrian access. Indented parking bays provide extended kerbs at crossing locations to improve pedestrian visibility and reduce the crossing distance.

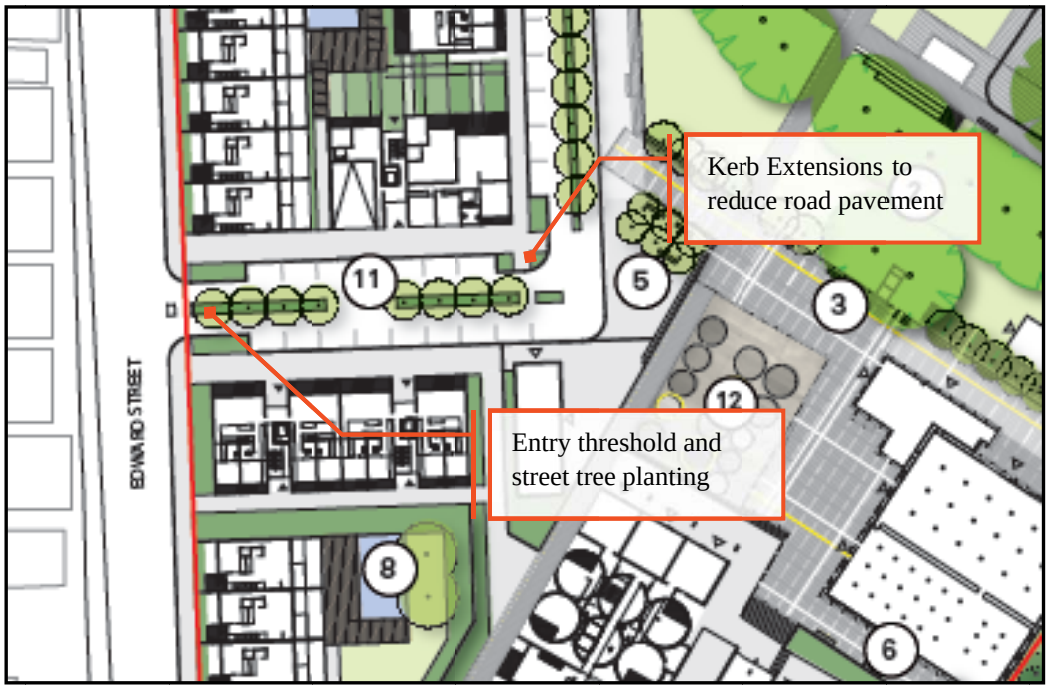

Figure 2 Internal Local Street Configuration

Restricted access to Smith Street and cul-de-sac treatment at the southern Edward Street access would prohibit the local streets being used by through traffic. These central medians would be installed at the new internal street intersections onto Smith Street and Edward Street. The installation of these medians would be fully funded by the developer.

These roads have been designed to adequately accommodate service vehicle access (8.8m long MRV). Turning paths with these vehicle types on these roads are shown below in Figure 3.

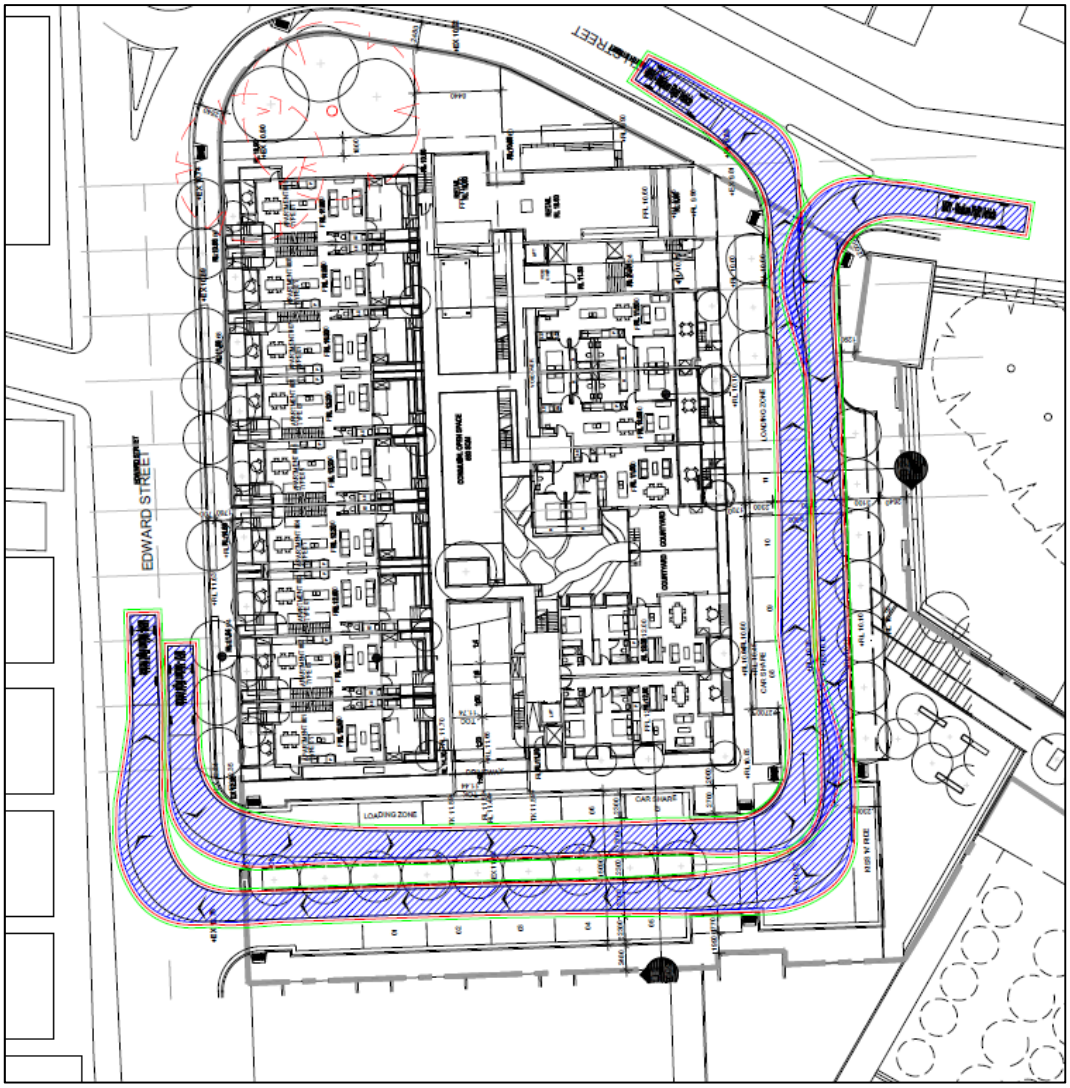

Figure 3 MRV Turning Paths through New Internal Streets

3.1.2 Traffic Management

The traffic management plan for the development is shown in Figure 4. It shows that the primary access points to the site are located on Edward Street with secondary left turn in/left turn out access points to Smith Street.

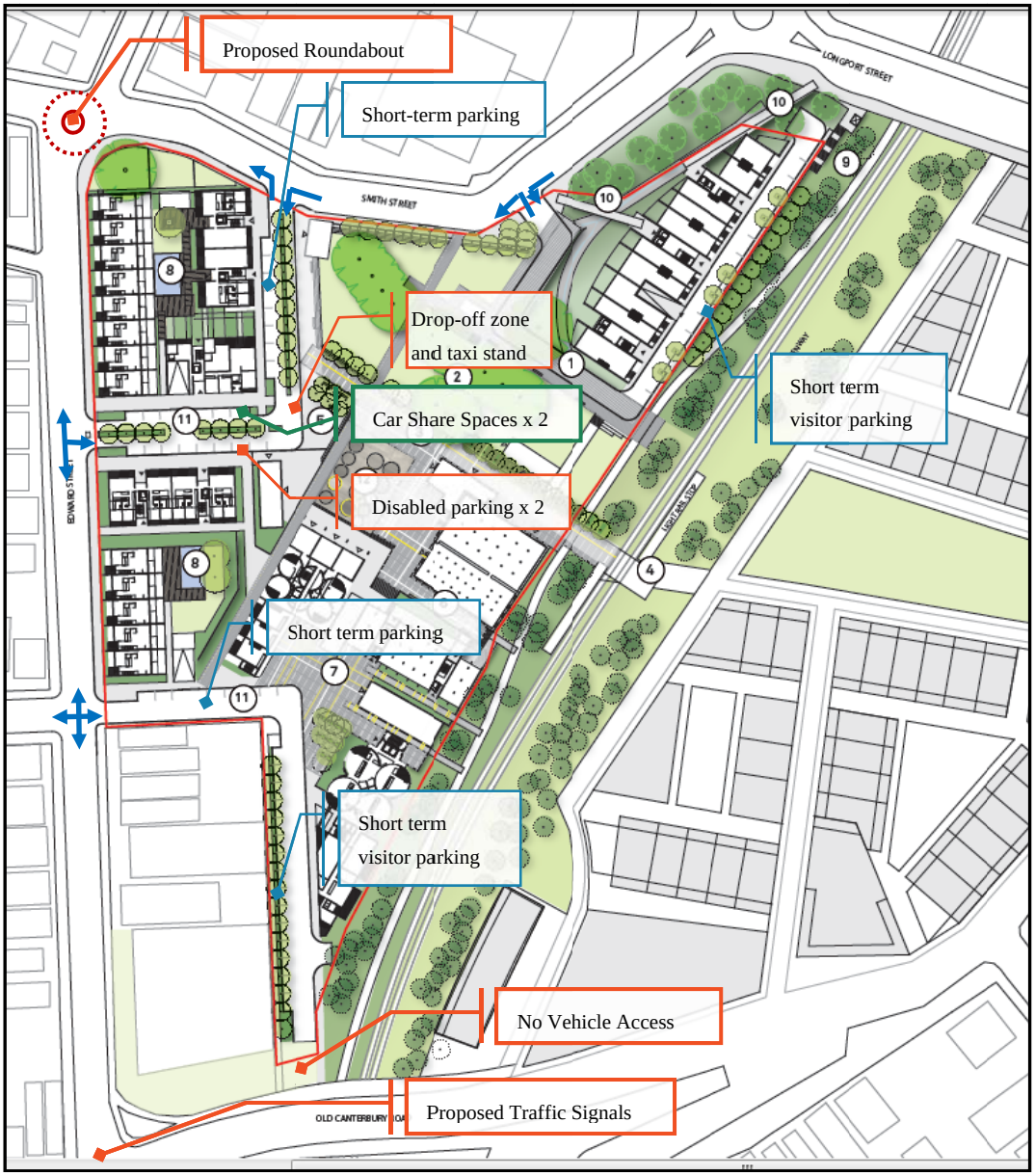

Figure 4 Traffic Management and Parking Plan

The proposal includes the installation of traffic signals at the intersection of Edward Street / Old Canterbury Road to enable adequate access for precinct traffic onto the main road system for travel south and east. Smith Street provides access onto Longport Street for drivers wishing to travel west and north. A roundabout is proposed at the Smith Street / Edward Street intersection to provide local circulation for Smith Street traffic.

3.2 Edward Street / Smith Street Roundabout

The roundabout proposed at the Smith Street / Edward Street intersection will provide local circulation for Smith Street traffic. The roundabout and associated civil works to the approaches will be fully funded by the SHFM development at the beginning of Stage 1. A detailed concept design of the roundabout is shown below in Figure 5.

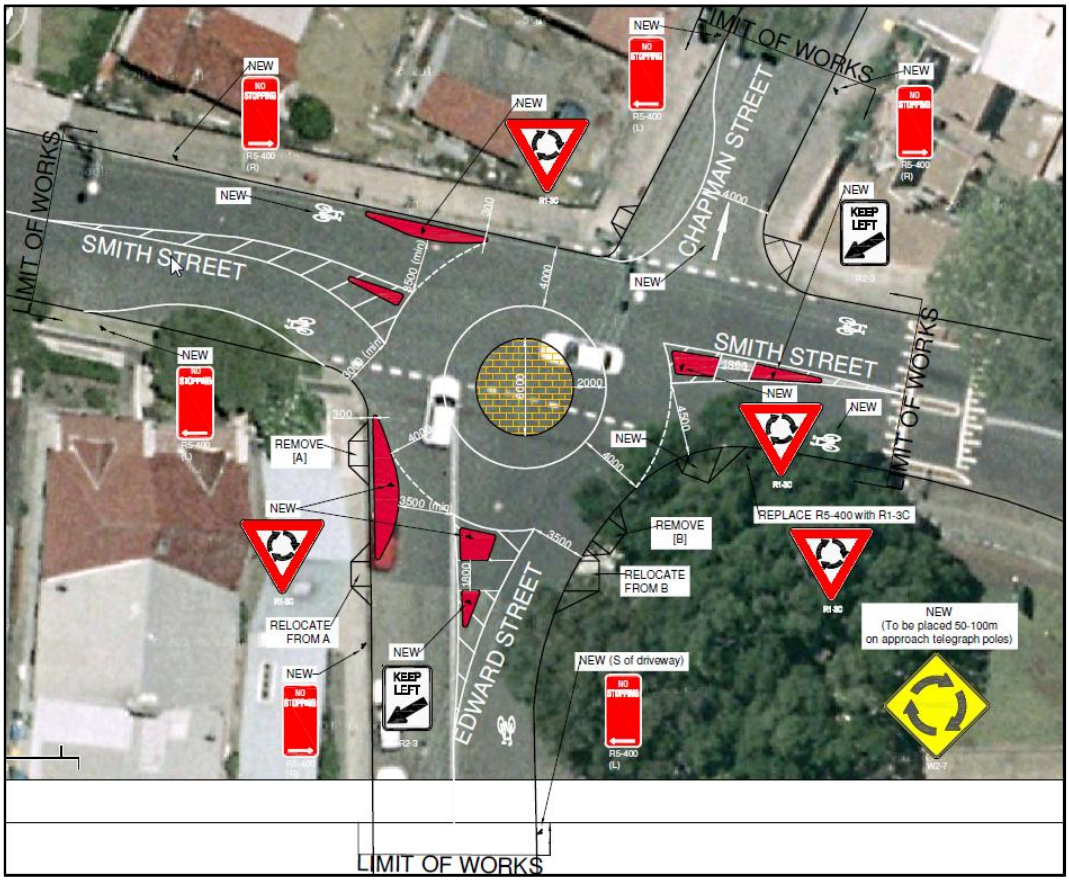

Figure 5 Roundabout Concept Design

The proposed roundabout has a mixture of line marking and raised medians to aid in traffic calming. The line marking and kerb blister design aid in deflecting drivers into the roundabout and slows vehicles down to provide a safer environment for pedestrians in the area. This design also allows for heavy vehicle movements (vehicles up to 12.5m long) between Smith Street and Edward Street for any potential bus movements. These movements are shown as turning paths below in Figure 6 and Figure 7.

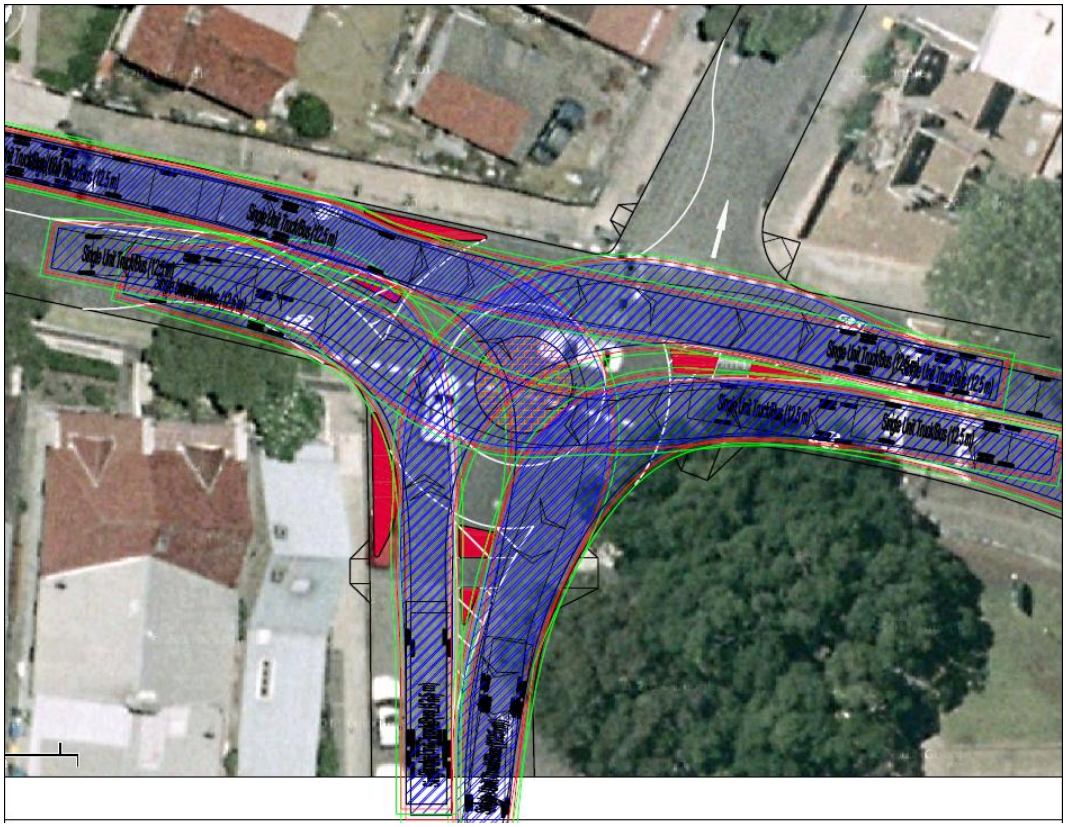

Figure 6 HRV (12.5m) Turning Paths

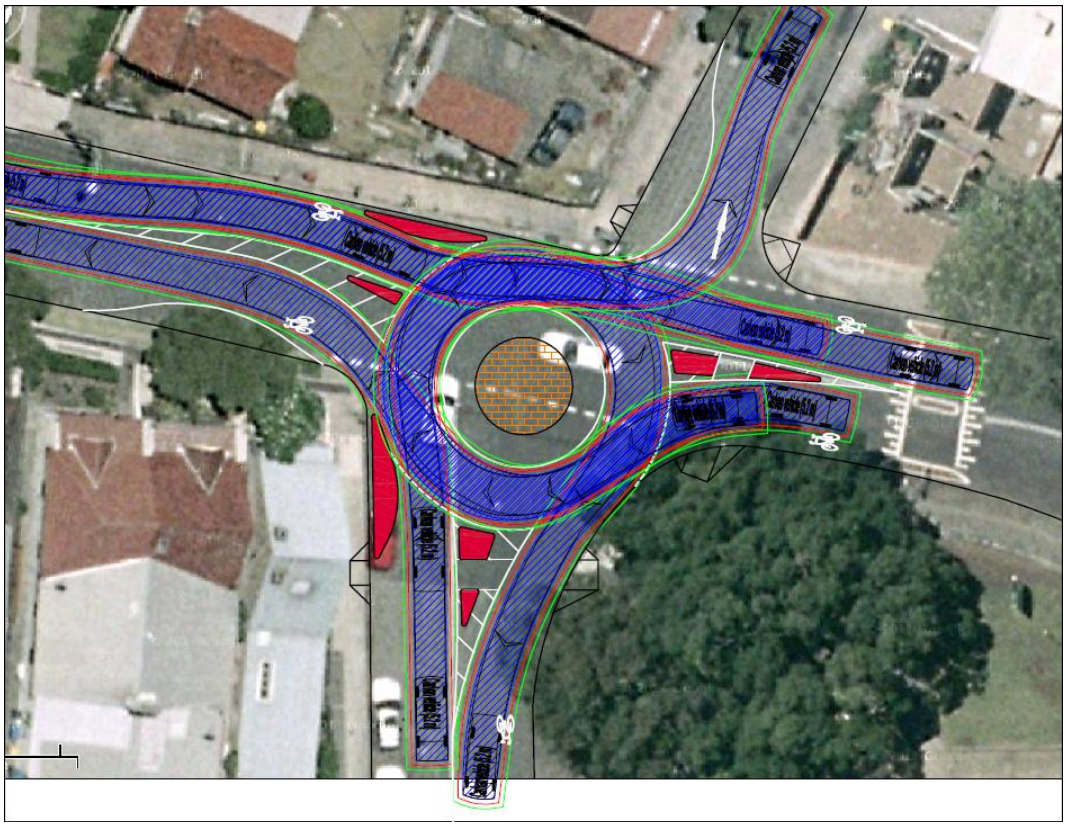

Figure 7 B99 Vehicle Turning Paths

3.3 Edward Street / Old Canterbury Road Traffic Signals

3.3.1 Intersection Configuration

The upgraded intersection involves local widening to create a short fifth lane on the eastern Old Canterbury Road approach. This short lane accommodates a left turn lane to the properties south of Old Canterbury Road. This involves considerable civil works and will impact on the local connection to houses to the south. A layout of the intersection is shown below in Figure 8.

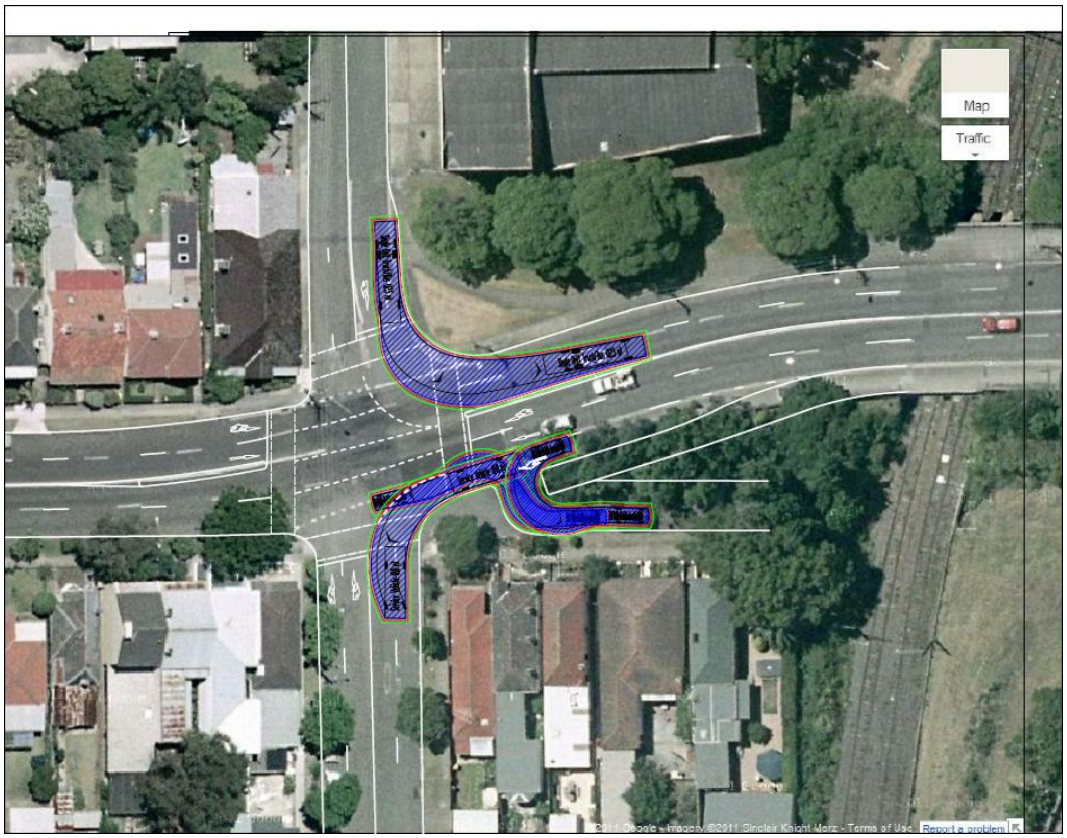

Figure 8 Edward Street / Old Canterbury Road Intersection

The bridge structure and services running across the bridge to the east restrict the length of the widening which creates a sharp deflection in the through traffic lanes. On the departure side of the intersection, car parking is permitted which requires traffic to merge back into a single lane. To accommodate the existing bridge design, one of the through lanes on the eastern Old Canterbury Road approach also utilises the centre westbound lane for through traffic and right turn traffic. This arrangement is possible because westbound traffic currently travels in a single lane across the bridge due to parking constraints in the kerbside lane. A more formal “No Stopping” arrangement would need to be installed. This layout achieves good visibility for westbound traffic and a more gradual deflection of through traffic. This type of treatment is not uncommon in the inner west with right turn traffic utilising the centre lane and through traffic moving into the kerb side lane.

The other approaches to the intersection will be formalised with two lanes and associate line marking. The signal phasing will be a standard two-phase. All movements will be permitted except for right turns from the west approach of Old Canterbury Road.

This intersection upgrade will be fully funded by EG Funds Management during the Stage 3 works. Additionally, a lump sum fee for the upkeep and maintenance costs of the first 10 years will be given to RMS as part of the handover.

3.4 Pedestrian Improvements

Arup conducted a local precinct audit of pedestrian and cyclist facilities around the site within 800m (approx. 10 minute walk). A series of measures to improve the pedestrian and cyclist environment have been identified and can be implemented to encourage walking and cycling.

3.4.1 Audit Findings

Footpath and kerb ramps are generally provided within the study area. However, most of the kerb ramps do not comply with the Australian Standard AS1428. Typical issues are kerb ramps not aligned to the path of travel, kerb ramp too steep, only one kerb ramp (instead of two) is provided at the corner of the road. There is only a small section of footpath disconnection audited along Smith Street (outside of the BP workshop).

There is generally a lack of way finding signage along key pedestrian routes. Directions to local schools, shops, train station and parks are not provided to orient cyclists and pedestrians. On-road cycle route road marking logos at major intersections need to be refreshed with reflective paint.

Lewisham train station and the surrounding area needs to be upgraded and revitalised to improve the attractiveness and increase pedestrian and retail activity in the area. Easy access upgrade would be critical for the station to serve the wide spectrum of community users (school children, TAFE students, park patrons and local residents).

The intersections at the immediate vicinity of the site should be upgraded to improve pedestrian and cyclist safety. Edward Street/ Smith Street intersection is offset and wide and could be realigned or improved with a revised traffic management arrangement. The proposed roundabout will include pedestrian refuge islands to reduce the crossing distance, improve pedestrian visibility and reduce traffic speed. The Carlton Cr/ Grosvenor Cr intersection would benefit from an upgrade to cater for pedestrians crossing. Refuges and kerb ramps should be provided at all four arms of the roundabout.

3.4.2 Actions Prioritisation and Recommendations

Summer Hill station has easy access facilities as well as a local mall with various types of shops. These are the key pedestrian attractors over Lewisham station despite the site being situated halfway between each station. The route in the immediate vicinity of the site and towards Summer Hill train station and shops, therefore, is identified as the priority route for the potential residents and users of the site.

The actions identified by the audit will provide significant improvement and it is proposed that the development contribute to some of the improvement works in the immediate vicinity of the site and along the route to Summer Hill station. The priority 1 recommended improvement works will be funded by the developer during the Stage 1 development and these are summarised below in Table 2. Ashfield and Marrickville Councils can fund improvement works in the extended area through normal Section 94 contributions.

Table 2 Priority 1 Recommended Works

ID	Street	Side	Cross Street	Issues	Sub Issues	Action	length (m)/ Unit	Photo No.	Priority	Cost Est.
28	Old Canterbury Rd	s	Watson St	Crossing facilities	Crossing width too wide	Provide pedestrian crossing as part of the signal intersection improvement	1	51	1	-
29	Old Canterbury Rd	n	Edward St	Crossing facilities	Kerb ramps not aligned to the travel path	Realigned kerb ramp to the path of travel as part of the signal intersection improvement	1	52	1	-
30	Old Canterbury Rd	n	Edward St	Bus access	No seating or shelter provided	Install seating and shelter	1	53	1	$13,000
31	Old Canterbury Rd	s	Edward St	Bus access	No seating or shelter provided	Install seating and shelter	1		1	$13,000
35	Carlton Cr	s	Lackey St	Crossing facilities	Kerb ramps not aligned to the travel path	Realigned kerb ramp to the path of travel	1	58	1	$1,500
36	Lackey St	e	Carlton Cr	Crossing facilities	Kerb ramps not aligned to the travel path	Realigned kerb ramp to the path of travel	1	59	1	$1,500
37	Carlton Cr	s	Lackey St	Path quality	Half side of the path is sloped, effective width <1.2m	Fill and level footpath	20	60	1	$3,800
38	Fleet St	w	Carlton Cr	Crossing facilities	Kerb ramp lip >5mm	Remove lip, flush with path	1	62	1	$1,500
39	Fleet St	e	Carlton Cr	Crossing facilities	Kerb ramp lip >5mm	Remove lip, flush with path	1	63	1	$1,500
40	Chapman St	w	Carlton Cr	Crossing facilities	Kerb ramp lip >5mm	Remove lip, flush with path	1	64	1	$1,500
41	Chapman St	e	Carlton Cr	Crossing facilities	Kerb ramp lip >5mm	Remove lip, flush with path	1	64	1	$1,500
42	Carlton Cr		Grosvernor Cr	Crossing facilities	No crossing facilities provided	Install kerb ramps and cut open refuges at all four arms	4	66	1	$22,000

43	Carlton Cr		Grosvernor Cr	Way finding	No signage for ped/bike	Install way-finding signage, indicate directions to Summer Hill station, Lewisham station, Parramatta Rd	1	66	1	$1,200
49	Smith St	w	Carlton Cr	Path quality	Missing footpath - section outside of BP workshop	Provide new footpath	8	76	1	$1,520
50	Edward St	e	Smith St	Way finding	No signage for ped/bike	Install way-finding signage, indicate directions to Summer Hill station, Lewisham station, Parramatta Rd	1	78	1	$1,200
51	Edward St	e	Smith St	Crossing facilities	Kerb ramps not aligned to the travel path	Realigned kerb ramp to the path of travel	1	79	1	$1,500
52	Chapman St	e	Smith St	Crossing facilities	Kerb ramps not aligned to the travel path	Realigned kerb ramp to the path of travel	1		1	$1,500
53	Smith St		Edward St	Crossing facilities	Missing kerb ramp	Install standard kerb ramp	3	78	1	$4,500
54	Edward St		Smith St	Road geometry	Wide intersection, long crossing distance	Straighten Edward St geometry to reduce crossing distance and traffic turning speed as part of the rounabout improvement work	1		1	-
55	Edward St	w	Laneway south of Smith St	Crossing facilities	kerb ramp - poor drainage	Improve drainage to avoid water build-up at the ramp	1	81	1	$1,500
56	Smith St	s	Nowraine St	Path quality	Tripping hazard - path lifted >5mm by tree root	Provide even footpath	1	82	1	$190
57	Lackey St		Smith St	Crossing facilities	No crossing facilities provided	Provide zebra crossing*	1	84	1	$10,000
	Priority 1 Total:									$83,910

4 Summary and Recommendations

This report describes the delivery of the four stages of development, addressing the key issues for traffic and parking of the development of the Summer Hill Flour Mill (SHFM) site (also known as the Allied Mills site). Key recommendations from the report are:

- Traffic management is dependent on the stage of works, and proposed works during the relevant stage. Staging of the road and public domain works has been considered based on the development mix.
- Stages 1 and 2 are relatively small stages and will add minimal traffic to the road system. Stage 3 is the largest stage of the development.
- During the beginning of Stage 1 works, a roundabout would be installed at the intersection of Smith Street and Edward Street to facilitate local circulation.
- A series of measures to improve the pedestrian and cyclist environment are also to be implemented during Stage 1 to encourage walking and cycling.
- The signalised intersection upgrade is triggered by Stage 3, which is the largest stage of works.
- Central medians installed on the existing surrounding streets will discourage a through traffic usage of the new internal roads.
- All associated works listed above including the intersection upgrades and civil works will be fully funded by EG Funds Management during the relevant stage of the works.