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Our Reference: G16439L-01B

2 June, 2014

Bayside City Council
PO Box 27
SANDRINGHAM 3191

can buses on VIC track
land > bus stops
this cant not Koolkuna

Attention: Mr Matt Kelleher

Dear Mr Kelleher,

HAMPTON WILLIS STREET PRECINCT UDF KOOLKUNA LANE ACCESS OPTIONS

We refer to the Urban Design Framework (UDF) for the Hampton Willis Street Precinct which was prepared by MGS Architects for Bayside City Council in 2013.

Background

The UDF contemplates the redevelopment of the triangular shaped land bounded by Hampton Street to the east, Willis Street to the north and the Sandringham Railway Line to the south-west. The sites contemplated for redevelopment include:-

- The VicTrack land comprising of the existing Hampton Railway Station 78 space commuter carpark and bus interchange,
- The Department of Human Services (DHS) land comprising public housing,
- The Council land comprising the 1st Hampton Scout Hall,
- The Council land comprising the Hampton Community Centre and Hampton Playhouse,
- The Council land comprising the 100 space at-grade public carpark to the west of Willis Lane, and
- The Council land comprising the 44 spaces at-grade public carpark to the east of Willis Lane.

There are two existing public roads which provide access to the development precinct from Willis Street along the northern precinct boundary. These streets include Willis Lane which provides for two-way traffic within a 6.9m carriageway and Koolkuna Lane which provides for one-way traffic from north-west to south-east within a narrow 3.0m carriageway.

Both streets can currently be used for vehicles to access the existing Council and VicTrack carparks, with vehicles entering the area via either street, and all vehicles exiting the area via Willis Lane. The existing businesses fronting the west side of Hampton Street and a residential property on the south side of Willis Street also gain access via Willis Lane and Koolkuna Lane. All buses accessing the existing bus interchange currently enter and exit the area via Willis Lane.

An extract from the UDF document showing the existing the location of roads, individual buildings and parking areas within the precinct is presented in Figure 1.



Figure 1: Existing Conditions within Precinct

The UDF also contemplates changes to the existing vehicle access routes through the precinct and a new configuration of the existing bus interchange. These changes include:-

- Realigning the north-western end of Koolkuna Lane to run in a north-south orientation along the eastern edge of the existing site containing the 1st Hampton Scout Hall and opening this section to two-way traffic,
- Widening the remaining section of Koolkuna Lane to a width of 15.0m including three parallel bus bays on the south-west side and footpaths on both sides,
- Changing the direction of traffic flow along Koolkuna Lane through the section parallel to the railway line such that all traffic enters via the south-eastern end and exits via the north-western end to the realigned section leading into Willis Street, and
- Realigning the bus routes such that all buses enter the precinct via Willis Street and exit via the new alignment of Koolkuna Lane.

In order for these changes to the road network to proceed it is necessary to redevelop the Council site containing the 1st Hampton Scout Hall in order to accommodate the realignment of Koolkuna Lane.

An extract from the UDF showing the changes contemplated to the road network is presented in Figure 2.

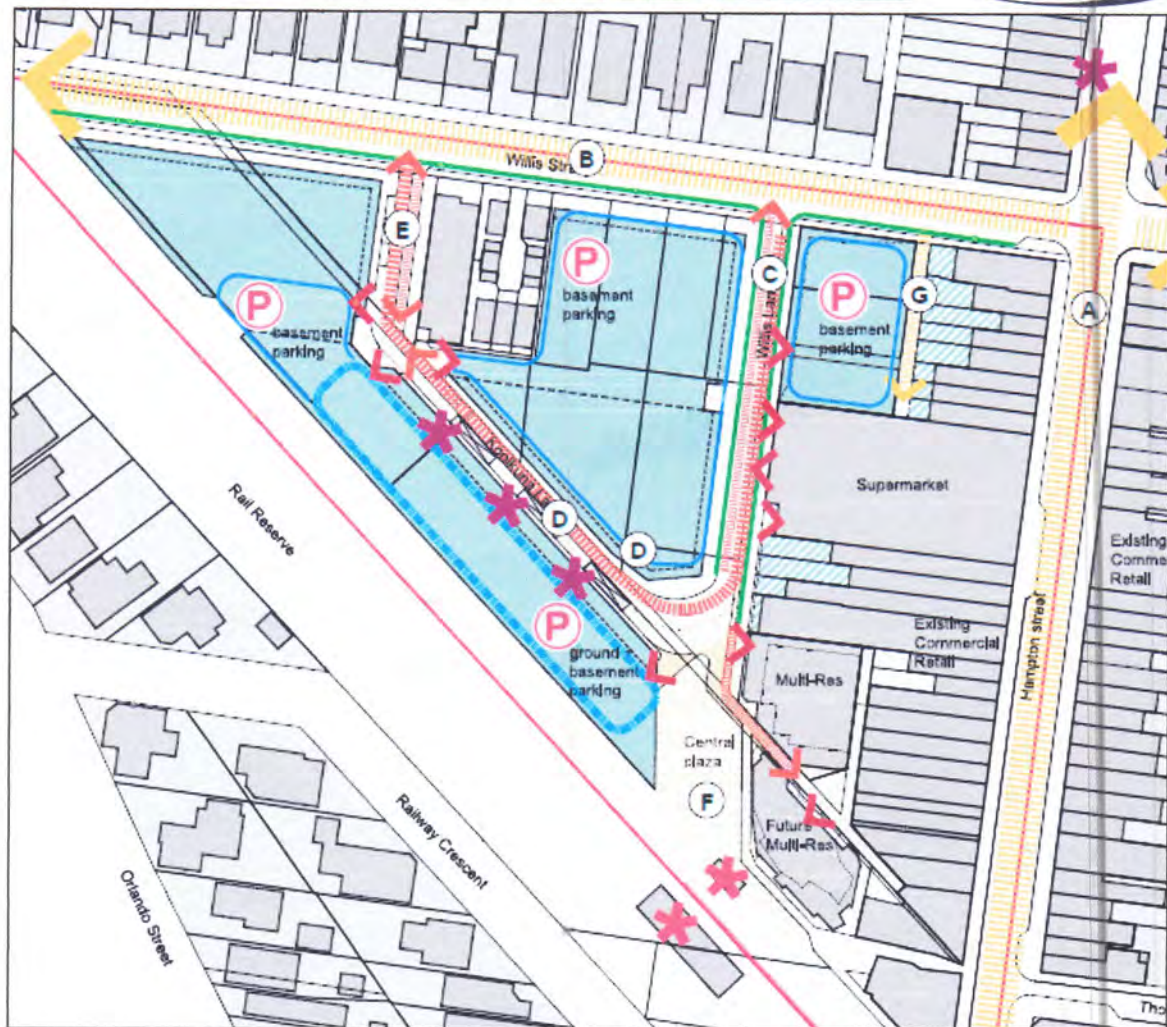


Figure 2: Proposed Changes to Road Network

Koolkuna Lane Access Options

It is understood that Council is looking to explore alternative access options which allow the redevelopment of the VicTrack and DHS sites to proceed whilst avoiding or minimising impacts to the Council site containing the 1st Hampton Scout Hall.

This letter discusses four alternative options to provide vehicle access through the Hampton Willis Street Precinct with concept plans provided for each option.

Option 1 – Retain Existing Koolkuna Lane Alignment:

This option involves retaining the existing alignment of Koolkuna Lane parallel to the railway line to connect through to Willis Street and abandoning the proposed realignment along the eastern edge of the Scout Hall property.

An advantage of this option is that it allows the redevelopment of the VicTrack and DHS sites to proceed without impacting on the existing Scout Hall.

However, the existing 3.0m Koolkuna Lane cross section is not likely to be supported by Public Transport Victoria (PTV) to accommodate bus movements, particularly given there is an existing solid wall and fence on the north-eastern edge of the lane which forms the boundary of the adjacent property containing the Scout Hall.

It is considered that the minimum pavement width for this section of Koolkuna Lane that is likely to be acceptable to PTV is 3.5m and would also require a separate pedestrian path to be provided along the south-western edge as it is not desirable for pedestrians and buses to be sharing the same space.

The widening of Koolkuna Lane to 3.5m and the provision of an adjacent 2.0m footpath would encroach into the existing DHS land on the south-west side of Koolkuna Lane and reduce the developable land by an area of approximately 160m² excluding the area currently occupied by the reservation for Koolkuna Lane.

A plan illustrating the alignment of Koolkuna Lane in this option is attached to this letter. The plan also illustrates the swept path of buses travelling along this alignment and the encroachment into the adjacent DHS site.

It is noted that this option also requires a small encroachment into the north-west corner of the Scout Hall property to provide a corner splay to accommodate the swept path of a bus turning right out from Koolkuna Lane into Willis Street. Whilst this corner splay encroaches into the Scout Hall title, the play is only slightly greater than the existing splay that is currently provided to allow traffic to turn left into Koolkuna Lane.

Whilst the plan illustrates the minimum treatment that is likely to be acceptable to PTV to separate buses and pedestrians along Koolkuna Lane, it is considered that a desirable cross-section would increase the pavement width to 5.0m and the footpath width to 3.0m. This would increase the extent of encroachment to 320m² and would allow room for a bus to pass a cyclist travelling along Koolkuna Lane and provide improved conditions for pedestrians.

Option 2 – Realigned Koolkuna Lane One-Way Entire Length

This option is similar to the option contemplated in the UDF document, however the realigned section of Koolkuna Lane is reduced in width and restricted to one-way traffic from south to north, with all traffic exiting towards Willis Street.

The one-way traffic flow allows the pavement width to be reduced from 8.8m in the option described in the UDF to 6.0m. The 6.0m pavement width allows for a 3.5m northbound traffic lane to accommodate northbound bus movements as well as three parallel parking spaces towards the northern end of the street. It is noted that the pavement width cannot be reduced by more than this at the southern end of the section, as the entire 6.0m width is required to enable a bus to turn the corner from the section of Koolkuna Lane parallel to the railway line. It could however be possible to reduce the width of Koolkuna Lane at the northern end if the parallel parking spaces are not provided.

The one-way option also retains the 3.5m footpath on the east side of the street that was included in the option from the UDF document as well as a narrower 2.0m footpath on the west side of the street. The option results in the overall width of the realigned section of Koolkuna Lane being reduced from 15.8m to 11.5m including footpaths. This option results in an encroachment into the Scout Hall property of 460m². Note that it would be possible to further reduce the cross-section width if the footpath was also reduced to 2.0m on the east side of the street adjacent to the existing residential building.

A plan illustrating the alignment of Koolkuna Lane in this option including a bus swept path movement around the corners and the encroachment into the Scout Hall property is attached to this letter.

Option 3 – Realigned Koolkuna Lane Two-Way Northern End

This option represents the option that was contemplated in the UDF that includes a realigned Koolkuna Lane with a two-way section at the northern end.

In this option the reservation width for the realigned two-way section of Koolkuna Lane is 15.8m incorporating an 8.8m two-way carriageway and 3.5m footpaths on both sides. This option includes a 3.0m southbound traffic lane in addition to a 5.8m northbound traffic lane which also incorporates parallel parking at the northern end. This option results in an encroachment into the land incorporating the Scout Hall of approximately 600m².

A plan illustrating the alignment of Koolkuna Lane in this option including a bus swept path movement around the corners and the encroachment into the Scout Hall property is attached to this letter.

It is noted that the reservation width of Koolkuna Lane could be reduced by 2.3m at the northern end to 13.5m if the three parallel parking spaces were not provided, retaining a 3.5m northbound traffic lane to accommodate northbound bus movements. However the additional 2.3m at the southern end of the section would still be required to accommodate the bus swept path.

Option 4 – No Change to Western End of Koolkuna Lane

This final option involves retaining the north-western end of Koolkuna Lane on its current alignment with one-way traffic flow continuing to enter the lane from the north-western end from Willis Street.

In this option it is not intended that buses would use this section of Koolkuna Lane, with buses instead directed to turn east through the land accommodating the existing Council carpark to exit the bus interchange. This would result in buses entering and exiting the precinct via Willis Lane as they do currently.

The option would avoid the need for any encroachment into the Council land accommodating the 1st Hampton Scout Hall but would instead result in an encroachment of approximately 735m² into the Council carpark land. Based on the existing carpark layout this would result in the loss of the northern row of 22 parking spaces that are currently available to the public. In addition it will also be necessary to obtain a corner splay from the Council land containing the Hampton Playhouse in order to accommodate the swept path turning from the western most bus bay.

→ EXTRA CAR SPOTS SCOUT HALL?

In order to accommodate a bus swept path at the widest point, it is determined that the accessway would need to be 9.3m wide in this option. A minimum 2.0m footpath has also been included on the south side of the accessway in a future scenario in the event that the carpark land were to be developed. It is noted also that to accommodate the swept path of a bus turning left into Willis Lane it will be necessary for the bus to cross the centre line of Willis Lane. This will mean that a bus will need to give way to traffic travelling in both directions along Willis Lane in order to complete the left turn.

A plan showing the alignment of the bus egress in this option, the bus swept path movement and the encroachment into the Council carpark site is attached to this letter.

Traffic Generation and Distribution

It is understood that following the long-term implementation of the UDF, the following extent of development is expected to be located within the Hampton Willis Street Precinct, including uses which exist currently:-

- 339 apartments,
- 1,092m² of specialty retail and cafes,
- 1,500m² gymnasium,
- 78 space railway commuter carpark, and
- 144 space public off-street carpark.

It is noted that the 144 space public off-street carparks will continue to serve businesses which exist on the west side of Hampton Street located on the eastern edge of the precinct.

Daily traffic generation rates for each of the uses have been adopted based on information contained within the New South Wales Road Traffic Authority Guide to Traffic Generating Developments, 2002. For the existing carparks it is estimated that the commuter carpark will generate two vehicle movements per space per day (i.e. one movement in and one movement out) and that the public off-street carparks which currently contain a mixture of parking restrictions may turn over three times per day resulting in six vehicle movements per space.

The table below summarises the expected daily traffic generation for the overall precinct.

Projected Precinct Traffic Generation

Use	Size	Rate	Daily Traffic Generation
Residential Apartments	339	5 per dwelling	1,695
Specialty Retail/Café	1,092m ²	0.555 per m ²	606
Gymnasium	1,500m ²	0.45 per m ²	675
Railway Commuter Carpark	78 spaces	2 per space	156
Public Off-street Carpark	144 spaces	6 per space	864
Total			3,996

The table suggests that the entire Hampton Willis Street Precinct could be expected to generate approximately 4,000 vehicle movements per day following full development within the precinct based on the existing UDF.

For the majority of the uses it is expected that traffic will enter and exit the precinct via Willis Lane. However, depending on where access points are located, there may be a need for some traffic to enter or exit the precinct via Koolkuna Lane which may include travelling along the section where the bus interchange is proposed. It is considered desirable for traffic movements through the bus interchange area to be minimised as this area is likely to experience significant pedestrian activity and the presence of stopped along the side of the road can restrict pedestrian visibility to passing traffic. The presence of traffic travelling along the street can also impact upon buses manoeuvring to and from the bus stops.

Depending on which access option is adopted and where access points to carparks are located will determine what extent of traffic is required to travel through the bus interchange area. By implementing access Option 3 (the option described in the UDF) it is possible for most traffic to avoid travelling through the section of Koolkuna Lane where the bus interchange is proposed. This is possible due to the two-way section at the northern end of Koolkuna Lane which allows traffic to enter and exit this area to Willis Street without the need to travel through the bus interchange.

Both Options 1 and 2 would result in traffic being required to travel through the bus interchange area if any access points to carparks are located on Koolkuna Lane to the west of the bus interchange area. Option 2 may be slightly preferable to bus operators due to the increased width proposed in the section of Koolkuna Lane to the north-west of the bus interchange.

It is possible that Option 4 may provide benefits over Options 1 and 2 in terms of minimising vehicle movements through the bus interchange area as depending on where carpark access points are located it may be possible for vehicles to enter via the existing north-western section of Koolkuna Lane from Willis Street and exit via the bus egress route through the existing Council carpark land, without the need for vehicles to travel through the bus interchange.

It is estimated that Options 1 and 2 would result in approximately 1,000 vehicles per day travelling along the section of Koolkuna Lane through the bus interchange. This volume would be significantly reduced in Options 3 and 4.

For the northern-western section of Koolkuna Lane, to the north-west of the bus interchange, it is expected that each of the options would result in the following approximate daily traffic volumes:-

- 1,000 vehicles per day for Options 1 and 2 which would include all traffic associated with the VicTrack and DHS developments exiting the precinct.
- 2,000 vehicles per day for Option 3 which would include all traffic associated with the VicTrack and DHS developments entering and exiting the precinct.

- 500 vehicles per day for Option 4 which would include half of the traffic associated with the VicTrack and DHS developments entering the precinct.

This projected traffic volume using the north-western section of Koolkuna Lane would also travel along the section of Willis Street between Willis Lane and Koolkuna Lane.

It is understood that there are currently up to 6 bus services per hour that are accommodated at the existing two bay bus interchange. With the addition of a third bus bay, the proposed interchange may accommodate up to 9 bus services per hour. Based on a 14 hour service span, this could result in up to 126 bus movements per day through the interchange in the future, or 84 movements based on the existing extent of services. In all the options apart from Option 4, these bus movements would travel along the north-western section of Koolkuna Lane and the section of Willis Street between Koolkuna Lane and Willis Lane.

Summary

Giving consideration to all of the options, it is considered that from the point of view of traffic and pedestrians safety as well as bus operations, Option 3 (the option described in the UDF) provides the most optimal arrangement to accommodate buses and private vehicle movements. In particular this option provides for direct access to each of the development sites without the need for traffic to travel through the bus interchange area, thereby minimising potential impacts to bus operations and pedestrian safety.

Option 4 provides the second best option in terms of minimising vehicle conflicts, however it is noted that this option results in the greatest reduction in developable land (735m²) impacting the opportunity to redevelop the Council carpark site, results in a loss of 22 existing parking spaces and requires buses to give way to traffic travelling in both directions on Willis Lane when exiting the precinct which would result in additional delays to buses.

Options 1 and 2 result in the least encroachment into Council land, however both of these options are expected to result in the greatest amount of traffic travelling through the bus interchange area, resulting in the least desirable conditions for the safe and efficient operation of the bus interchange.

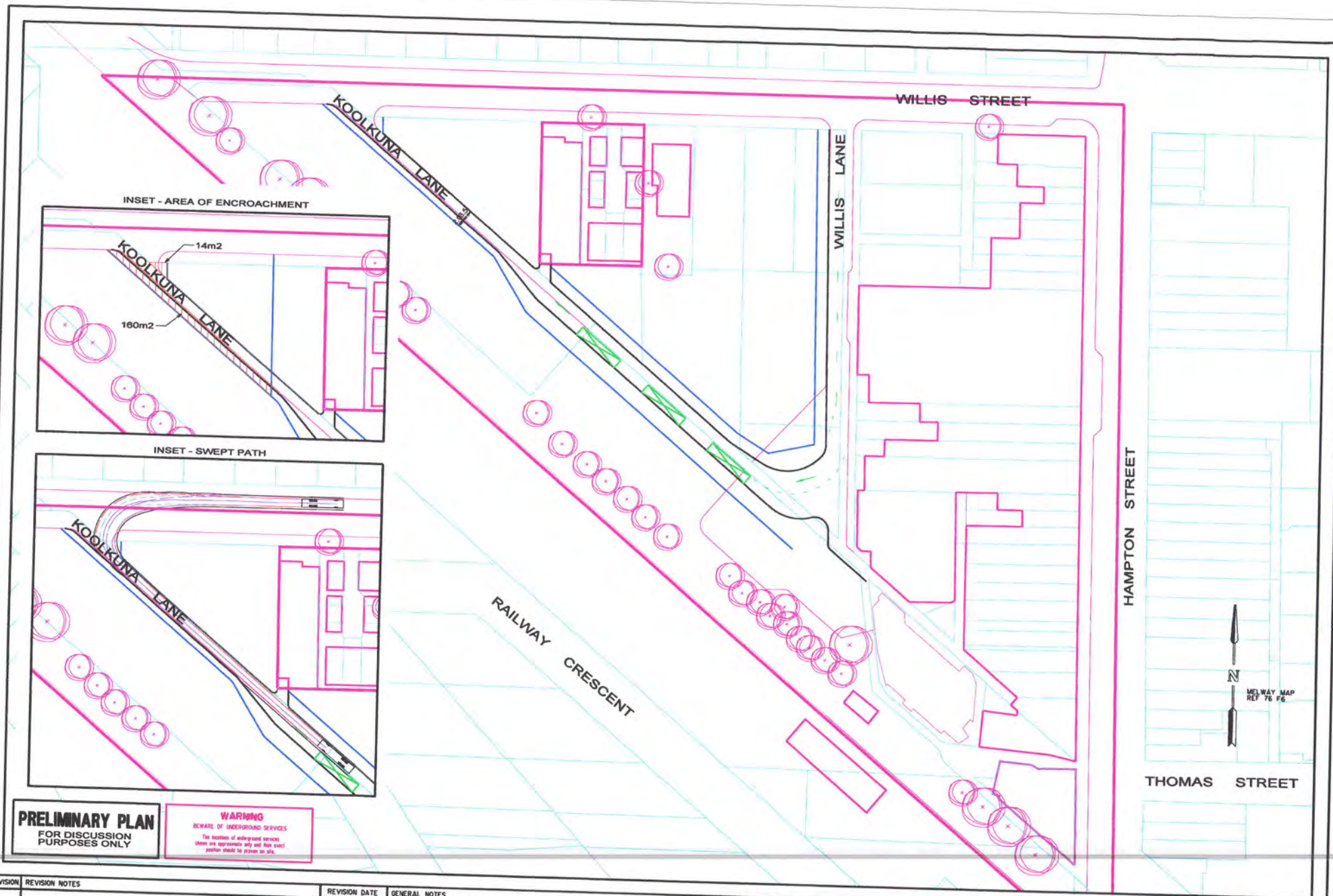
We trust the findings of this assessment are of assistance. Should you have any questions in relation to the information contained within this letter please contact Ross Thomson at our Glen Iris office.

Yours faithfully,

TRAFFIX GROUP PTY LTD



ROSS THOMSON
ASSOCIATE



PRELIMINARY PLAN
FOR DISCUSSION
PURPOSES ONLY

WARNING
BEWARE OF UNDERGROUND SERVICES
The location of underground services
shown on this drawing is not a guarantee
position should be proven on site.

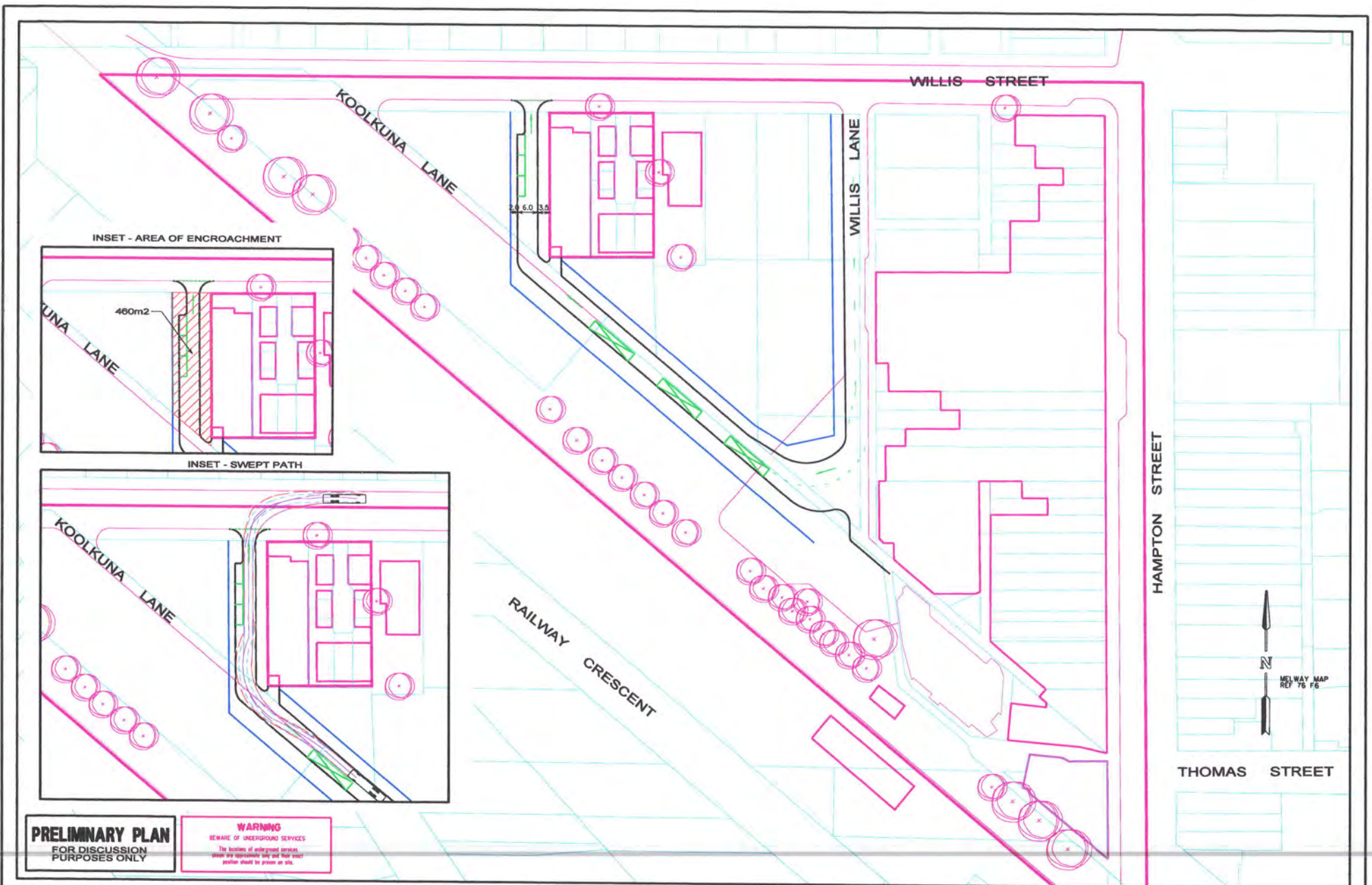
REVISION	REVISION NOTES	REVISION DATE
B	MINOR PROPERTY BOUNDARY UPDATES	02 JUNE 2014
A	ISSUE FOR COMMENTS	28 MAY 2014

GENERAL NOTES
1. BASE INFORMATION FROM MGS (DRAWING 13138 13121 HAMPTON BASE MAP DWG & 13138 13122 HAMPTON PRELIM DWG)
2. ALL DIMENSIONS ARE TO FACE OF KERB & CHANNEL.

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HAMPTON WILLIS STREET PRECINCT UDF - HAMPTON
BAYSIDE CITY COUNCIL
OPTION 1 - CONCEPT PLAN



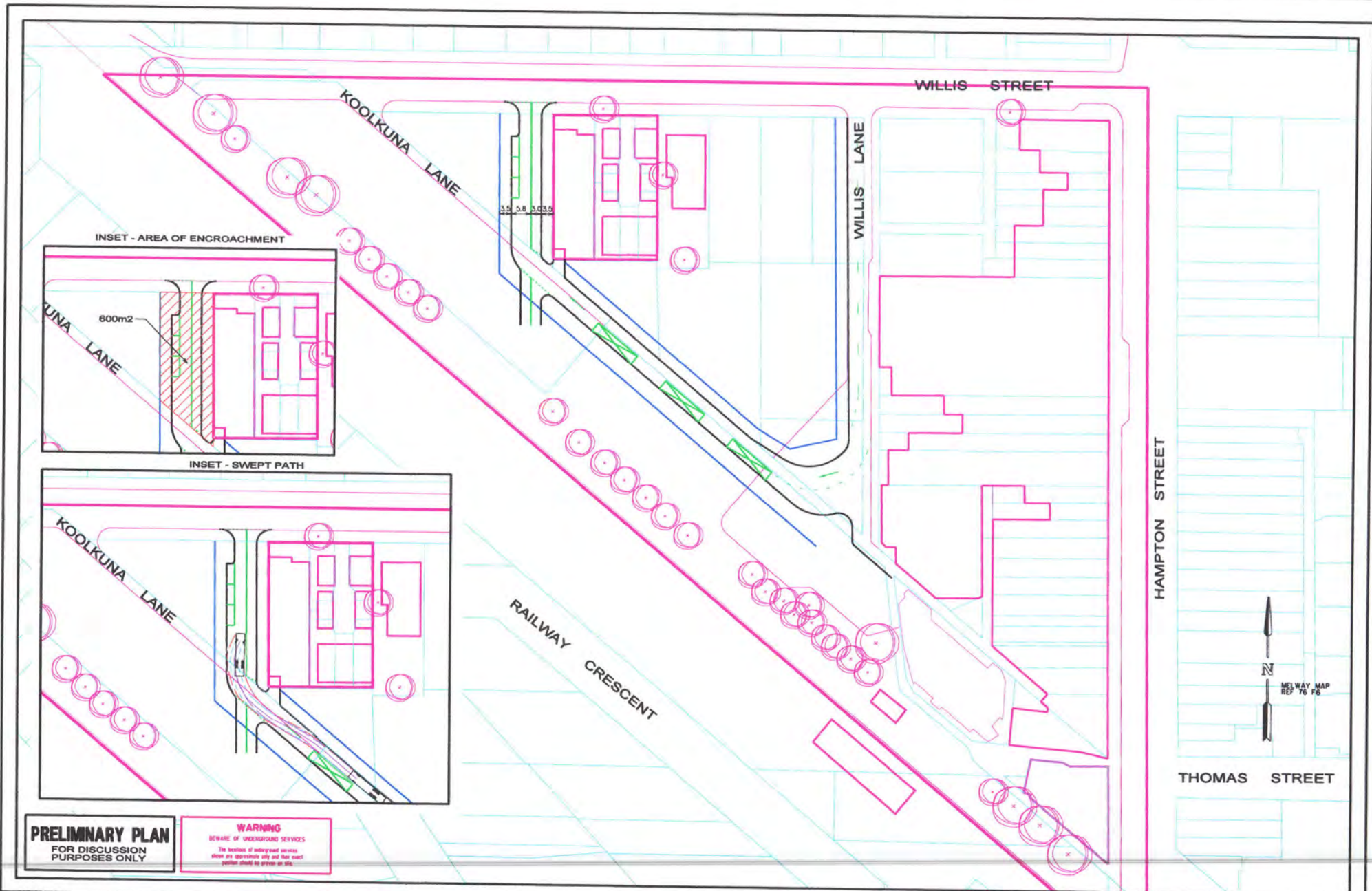
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A	ISSUE FOR COMMENTS	28 MAY 2014


GENERAL NOTES
1. BASE INFORMATION FROM HGS (DRAWING 13108 131121 HAMPTON BASE MAP.DWG & 13108 131122 HAMPTON PRELIM.DWG)
2. ALL DIMENSIONS ARE TO FACE OF KERB & CHANNEL.

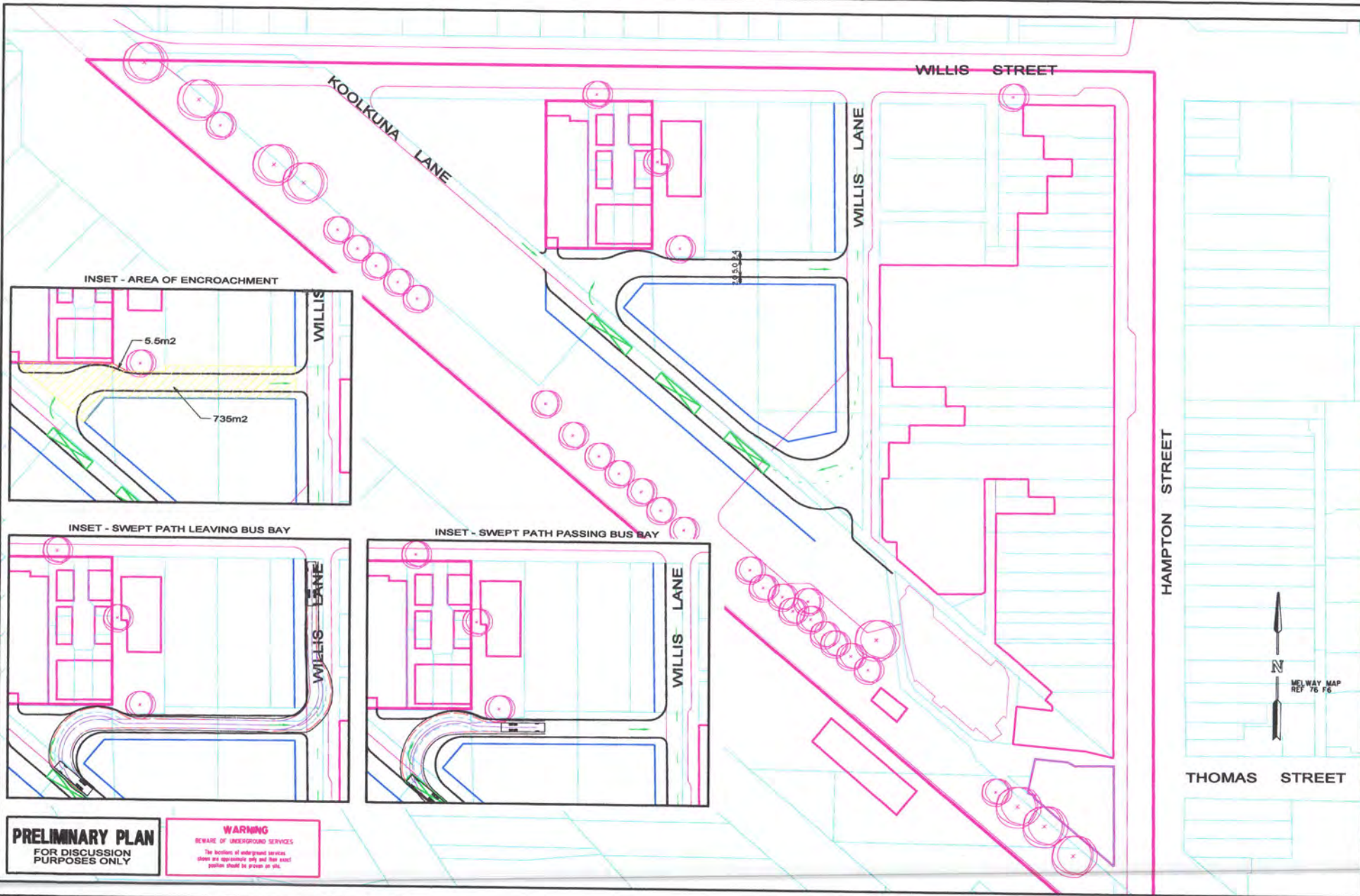
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HAMPTON WILLIS STREET PRECINCT UDF - HAMPTON BAYSIDE CITY COUNCIL	
OPTION 2 - CONCEPT PLAN	
SCALE 0 5 10 20	SHEET No. 2 of 4
DWG No. G16439-22	



REVISION	REVISION NOTES	REVISION DATE	GENERAL NOTES	DESIGNED	28 MAY 2014	 <small>Traffic Engineers and Transport Planners</small> <small>Suite 54/51 Tucker Road TEL: 033 3462 0388</small> <small>GLENN RIDGE VICTORIA 3186 FAX: 033 3462 1144</small> <small>www.traffixgroup.com.au</small>	HAMPTON WILLIS STREET PRECINCT UDF - HAMPTON BAYSIDE CITY COUNCIL OPTION 3 - CONCEPT PLAN	
			1. BASE INFORMATION FROM MGS (DRAWING 13108 131021 HAMPTON BASE MAP DWG & 13108 131022 HAMPTON PRELIM DWG) 2. ALL DIMENSIONS ARE TO FACE OF KERB & CHANNEL.	CHECKED/APPROVED	28 MAY 2014			
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GENERAL NOTES

1. BASE INFORMATION FROM HG5 (DRAWING 13108 131021 HAMPTON BASE MAP.DWG & 13108 131022 HAMPTON PRELIM.DWG)
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HAMPTON WILLIS STREET PRECINCT UDF - HAMPTON
BAYSIDE CITY COUNCIL
OPTION 4 - CONCEPT PLAN

SCALE 0 5 10 20 SHEET No. 4 of 4 DWG No. G16439-24