

WICKHAM LOCAL AREA TRAFFIC MANAGEMENT (LATM) STUDY

Discussion Report
January 2017



Wickham Local Area Traffic Management (LATM) Study - Discussion Report

Production:

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Wickham Suburb
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1.0 Background

Wickham Village has seen significant change in the last 2 years. In 2014, the State Government announced that Light Rail would be introduced in the Newcastle CBD and a Wickham Transport Interchange would be built just west of Stewart Avenue.

Since the announcement from the State Government, concerns on what is the long term plan for Wickham were raised by the Wickham residents through GLOW (Great Lifestyle of Wickham). What would be the impact of the new Transport Interchange and the on-going parking problems in Wickham? The area has terraces and cottages with no off-street parking, narrow laneways, lack of landscaping which encourages speeding, no traffic calming devices, on-going street parking problems with workers parking all day, and concerns about increased truck movements.

To address the parking issues raised by GLOW, the Wickham Parking Study was developed and finalised in October 2014. Implementation of resident parking zones and other recommendations were carried out in early 2015.

On 26 December 2014 the heavy rail line was cut at Railway Street between Hunter Street and Station Street. Railway Street was closed to vehicular and pedestrian traffic. After the railway line closure, there was an increase of Development Applications (DA) in the area with old buildings being demolished and re-developed. A large development was constructed in Throsby Street, three more DAs were submitted, and another large residential building DA has recently been approved for Charles Street, north of Station Street. Due to the number of DA's under consideration, residents are concerned for the future of Wickham with the mixture of industrial, heritage cottages and new unit buildings under construction. Council advised that a Wickham Master Plan would be developed.

In April 2016 a draft Wickham Master Plan was developed aiming to guide the redevelopment of Wickham in context with Council strategies and the long term vision for the Newcastle City Centre. Council envisages that once the plan is adopted, it would be implemented through different mechanisms such as potential Local Environmental Plan (LEP) amendments, Public Domain Plan, Plan of Management (POM) for Wickham Park, S94A developer contribution plan for Wickham and a Local Area Traffic Management Plan (LATM).

This study is to establish a Local Area Traffic Management (LATM) Plan for Wickham.

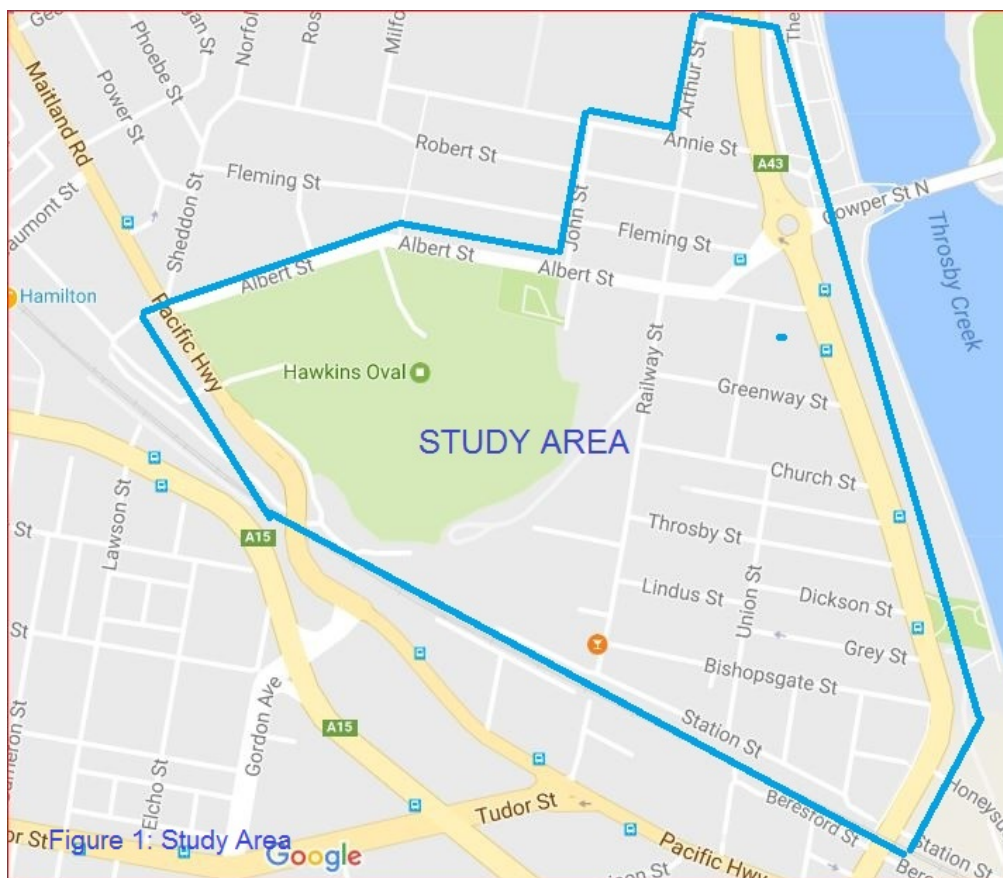
2.0 Objectives of the Study

The main objective of the study is to develop a Local Area Traffic Management Scheme in the Wickham area. The study will look into the following:

1. Increasing residential amenity and reducing vehicle speeds,
2. reduce through traffic on local roads,
3. reduce heavy vehicle through traffic in narrow streets,
4. identify the road hierarchy of the area and identify major routes to encourage through traffic,
5. identify pedestrian facilities that provide continuity for pedestrians from one destination to another within the local area,
6. increase safety for cyclists, and
7. identifying traffic management devices and pedestrian facilities that could be incorporated in the Section 94 contribution plans used by Council in assessing and determining Development Applications.

3.0 Study Area

The study area covered is bound by Mary Street in the north, Hannell Street in the east, the railway line (Station Street) in the south, and part of Albert Street and Wickham Park in the west. **Figure 1** shows the study area.



4.0 Development of a Local Area Traffic Management (LATM) Scheme

The objectives of a LATM plan are:

- To provide a safer environment and improve residential amenity for local residents,
- reduce traffic problems and treat dangerous intersections, and
- review and adopt a road hierarchy plan for the area in order to establish road function and amenity criteria.

A safer environment could be achieved by reducing speed and/or volume of through traffic and improved pedestrian facilities such as median refuges, zebra crossings or traffic signals.

Reducing traffic problems and treating dangerous intersections could be achieved by improved intersection layouts, installation of roundabouts or traffic signals, traffic islands, speed control devices, give way/stop signs, one-way traffic flow, etc. The extent of through traffic into the study area particularly during peak hours, or future by-passing traffic from the Wickham Interchange is often identified as the causes of traffic related problems. Improvements such as one-way traffic flow or speed control devices may be appropriate where a local road network joins the arterial road system.

The solutions chosen must balance the traffic function of a road against the local amenity function and seek to avoid simply transferring traffic from one local street to another. While road closures and one-way streets have the most direct effect on volumes and cannot be excluded from consideration, such devices also have the most significant impact on other local roads and must be very carefully used to avoid transferring problems to other residents.

4.1 The Road Hierarchy Plan

A road hierarchy plan classifies roads according to their existing or intended function in the street network. The plan is based on traffic and amenity criteria and is designed to ensure the integrity of neighbourhoods by diverting through traffic to routes upgraded for the purpose of carrying regional traffic.

It also provides a framework for all other traffic related decisions, precluding ad-hoc decision making which could ultimately compromise more worthwhile area - based traffic objectives.

The classification system of arterial, sub-arterial, collector and local roads formulated by the Roads and Maritime Services (RMS) was utilised by Council when developing its Road Hierarchy for the city. The road classifications are:

Arterial Road

An Arterial Road is a road that predominantly carries through traffic from one region to another. Use of local traffic management devices in these streets is not appropriate, although larger roundabouts are suitable. Traffic volume is more than 15,000 vehicles per day.

Sub-arterial Road

A Sub-arterial road is a road connecting arterial roads to areas of development and carrying traffic directly from one part of the region to another. It can supplement the arterial road system. Use of typical LATM devices is not appropriate in these streets, although roundabouts are suitable. Traffic volume typically ranges from 5,000 - 20,000 vehicles per day.

Collector Road

A Collector road is a non-arterial road that mainly collects and distributes traffic in an area, as well as providing access to abutting properties. It may carry some through traffic but not to a major degree. Use of LATM devices in these streets other than roundabouts (including small roundabouts) is not generally appropriate and requires great care. Traffic volume typically ranges from 2,000 to 10,000 vehicles per day.

Local Road

A Local Road is a road or street used primarily for access to abutting properties. Where this class of street receives inappropriate use it could be subject to intensive treatments such as road closures, raised thresholds etc., to restrict use. Traffic volumes of less than 2,500 vehicles per day are desirable.

4.2 Existing and Proposed Road Hierarchy Classification

Council adopted the Newcastle Road Hierarchy Plan in 1995. Hannell Street is classified as an arterial road in the Road Hierarchy Plan. Albert Street and Railway Street are classified as collector roads in the Road Hierarchy Plan.

Railway Street and Albert Street collect and distribute traffic from the nearby streets of Wickham and Islington and provide access to and from sub-arterial roads such as Hunter Street to the south of Railway Street, Maitland Road to the west of Albert Street, and arterial road Hannell Street to the east.

Since the closure of the railway line at Railway and Station Streets, the volume of traffic in Railway Street has reduced from 3,500 vehicles per day (vpd) in 2014 to 2,365 vpd in 2016. This may increase once the Wickham Interchange is completed.

Railway Street is proposed to be classified as a local road or major local road in the Wickham area.

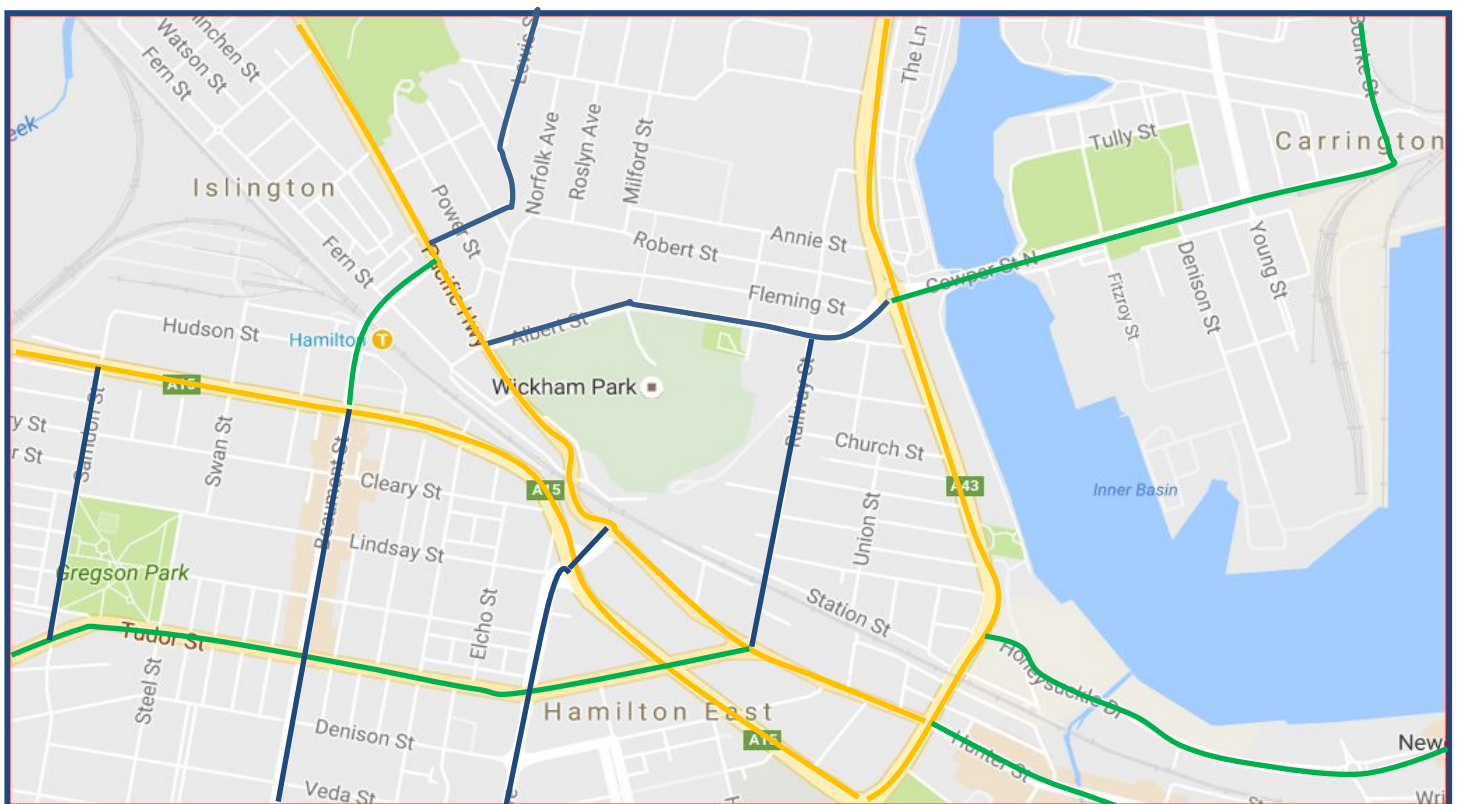
Albert Street has catered for additional traffic since the closure of Railway Street at the railway line (north of Station Street). There were also changes in the Hunter Street and Stewart Avenue traffic flows that discouraged traffic from using Stewart Avenue with some traffic now using Albert Street due to the increased volumes.

It is recommended to maintain the classification of Albert Street as a collector road in the Road Hierarchy Plan.

Other roads within the Study area are designated as local roads. Residential amenity and safety should be maintained to retain local identity. The road classification of each road has been reviewed based on access, purpose, and traffic volume, and no changes are proposed within this area.

The proposed Road Hierarchy Plan for the Wickham area is shown in **Figure 2**.

Figure 2: Road Hierarchy Plan For Wickham



Legend:

- - Arterial Road
- - Sub-arterial Road
- - Collector Road
- - Local Road

5.0 Traffic Surveys and Crash Data

Traffic counts surveys were conducted in a number of locations to determine the traffic volume and speeds. **Figure 3** shows the daily traffic volume of Railway Street, Throsby Street, Albert Street, Church Street, Union Street and Fleming Street. It also shows the average speed and the 85th percentile speed of vehicles. The 85th percentile speeds are the speeds below which 85% of vehicles travel. All local roads in the study area, including Railway and Albert Streets, are 50 km/h speed limit roads.

Surveys indicated that vehicles in the study area particularly on the narrow road widths are travelling at speeds similar to other local roads in the Newcastle area. The traffic surveys also revealed that speed in the study area are in comparison with other average speed surveys in other streets in the City.

A summary of traffic counts conducted in the area are shown in **Table 1** for comparison with the counts gathered by Transport for NSW as part of the Wickham Interchange study which are shown in **Figure 3**. **Table 1** shows traffic volume, speed and the percentage of heavy vehicles travelling the streets. The survey results will be discussed in detail in the Traffic Assessment section by street.

Table 1 - Summary of Traffic Volume and Speed Data

Legend: ADT - Average Daily Traffic 2014 - from REF Wickham Interchange Report

Street	Description	Traffic Speed (average / 85 th percentile) (Km/h)	ADT 2014 (vpd)	ADT 2016 (vpd)	Heavy Vehicles 2016 (%)	Road Orientation (EW or NS)	Directional Traffic Distribution (%) (East- West or North -South split)
Albert Street	West of Railway St	50/57	4,000	4,314	5%	EW	45% - 55%
Albert Street	West of Foundry St	38/52	4,000	1,098	26%	EW	31% - 69%
Fleming Street	West of Branch St	33/41	N.D.	642	4%	EW	97% - 3%
Railway Street	North of Fleming St	35/47	3,500	1,021	1.5%	NS	26% - 74%
Railway Street	South of Greenway St	40/50	3,500	2,365	9%	NS	48% - 52%
Church Street	West of Hannel St	36/45	N.D.	577	2.7%	EW	65% - 35%
Throsby Street	West of Hannel St	33/42	1,000	1,619	3.5%	EW	58% - 42%
Union Street	South of Throsby St	32/41	N.D.	715	2.8%	NS	76% - 24%

ADT 2016 - Various dates from April to November 2016

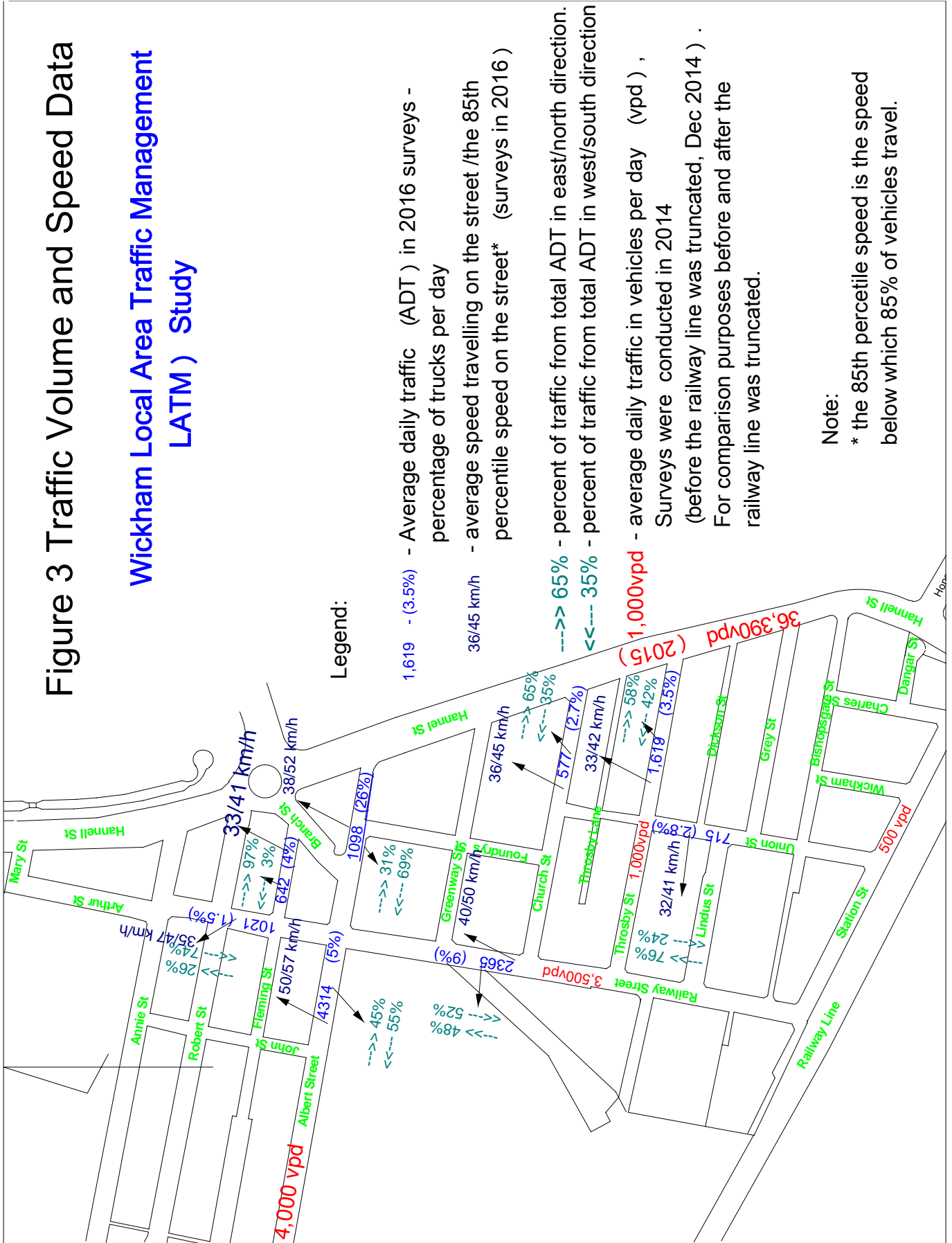
EW - East West Orientation

NS - North South Orientation

ND - No Data available

Figure 3 Traffic Volume and Speed Data

Wickham Local Area Traffic Management (LATM) Study



5.1 Crash Data

Annexure A shows the crash history at a number of intersections in Wickham for the last 5 years. There were few accidents in Railway Street between Anne Street and Fleming Street. There were six accidents at the intersection of Railway Street and Albert Street. Traffic control treatments as detailed in the following section are recommended for this intersection to reduce accidents.

6.0 Traffic Assessment

6.1 Local Traffic Area (40)

Speeding in their local streets is the most common concern raised by residents. This also contributes to concerns that residential amenity is affected. Speed limits are one of the oldest and most proven strategies to regulate speeds on local roads. RMS sets speed limits in NSW.

The default limit on local roads in NSW is 50 km/h. On major roads, speeds range from 60 to 80 km/h in the Newcastle area.

RMS sets speed limits using the safe system approach which advocates for a safe road system. RMS released a speed zoning guideline in determining speed limits for the road environment in 2011.

Special speed limits of 10 km/h shared zones are used in some areas in Newcastle. The 40 km/h High Pedestrian Activity Area (HPAA) speed limit is also used in local neighbourhood centres where high pedestrian activity areas are observed. The 40 km/h Local Traffic Area (40 LTA) are applied in some Newcastle suburbs such as Cooks Hill, Hamilton South, Tighes Hill, Islington and Maryville.

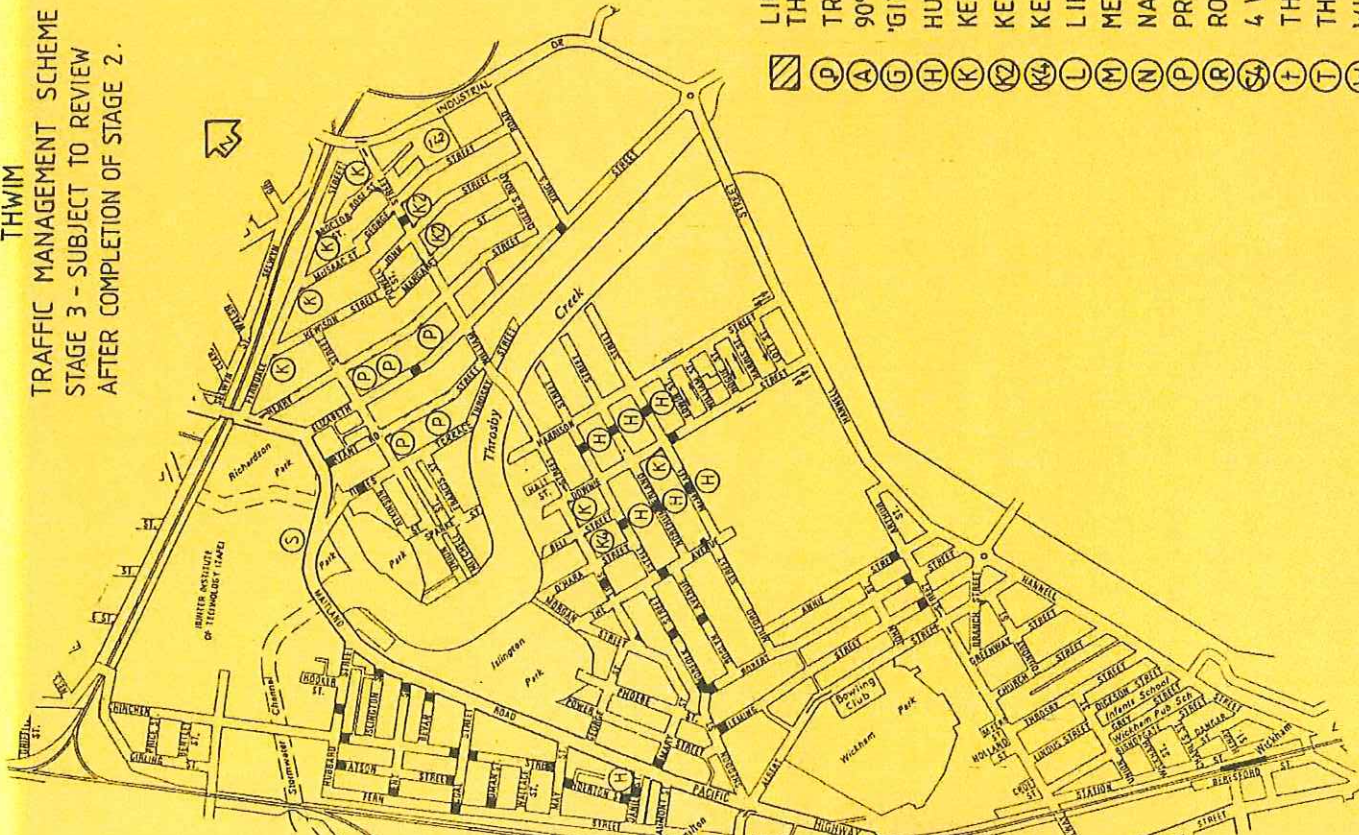
In 1993, the second and third stages of the 40 LTA's Study was approved by Council for Tighes Hill, Wickham, Islington and Maryville (THWIM) and implemented as shown in **Figure 4**. The first stage of THWIM was completed in approximately 1991. Unfortunately, at that time the Wickham area was not included and was deferred as it was waiting on a decision relating to Wickham Public School. However, Robert, John, Fleming and Annie Streets west of Railway Street were considered in the THWIM study.

Based on the speed surveys and to increase residential amenity, it is recommended to consider Wickham as a 40 LTA bound by Hannell Street, the railway line, Maitland Road, Albert Street and Annie Street.

It is not proposed to include Annie, Arthur and Mary Streets in the 40 LTA as they are used for heavy vehicle access to the Caltex Depot. Speed humps are not recommended in these streets.

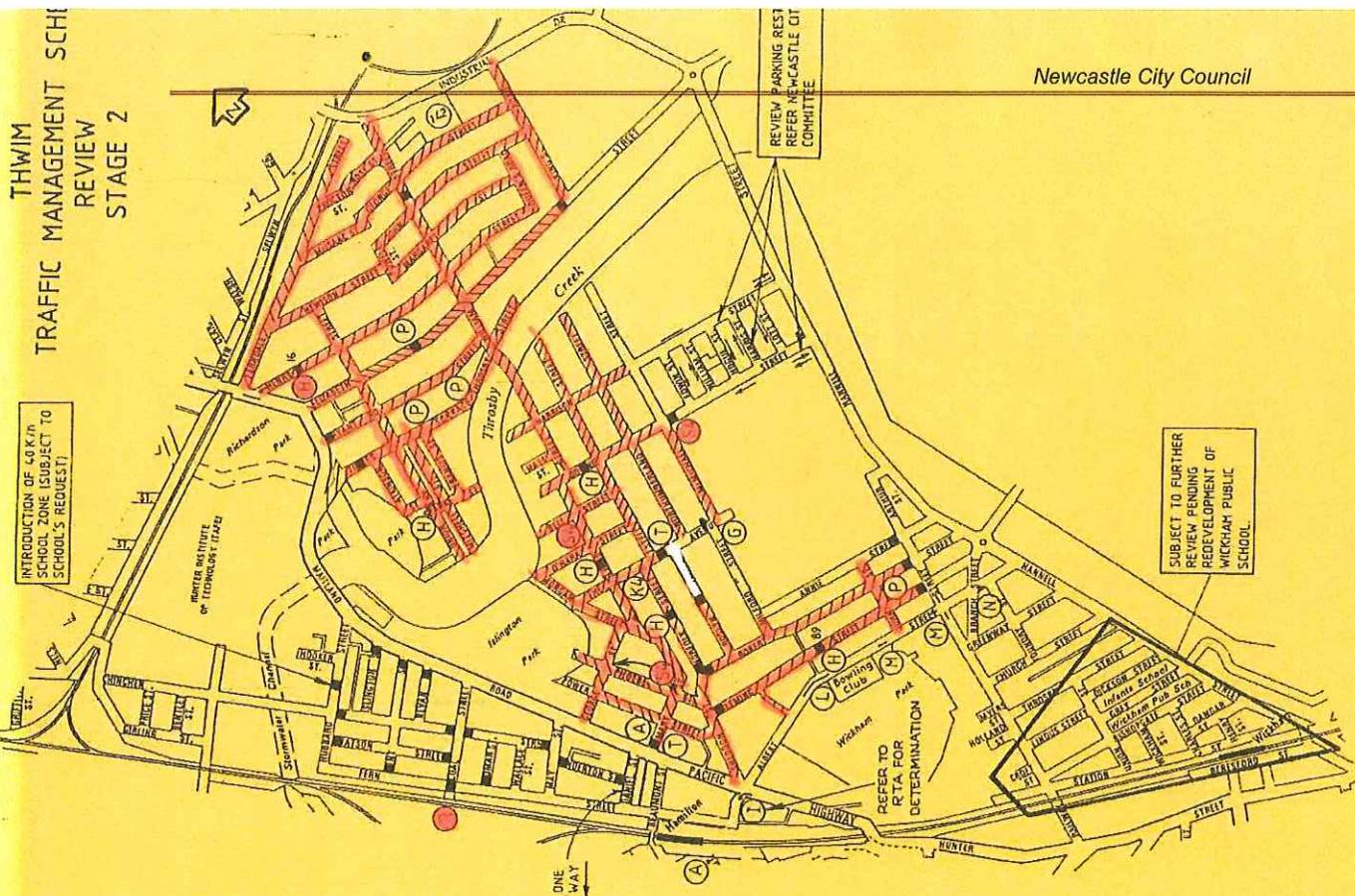
The proposed Wickham 40 LTA is shown in **Figure 5**.

THWIM
TRAFFIC MANAGEMENT SCHEME
STAGE 3 - SUBJECT TO REVIEW
AFTER COMPLETION OF STAGE 2.



Ⓣ - STAGE 3 CONSTRUCTION

THWIM
TRAFFIC MANAGEMENT SCHEME
REVIEW
STAGE 2

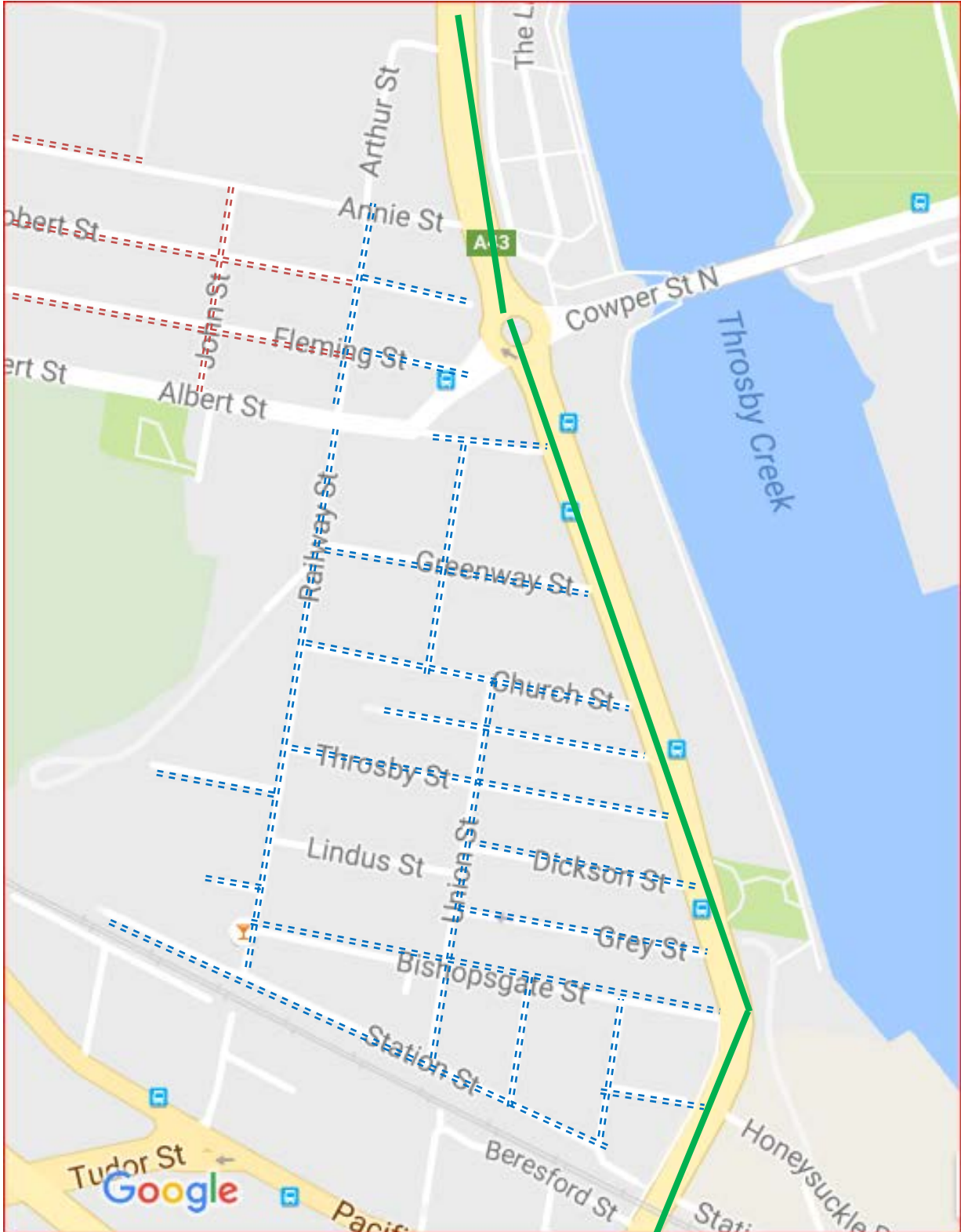


Ⓣ - STAGE 2 CONSTRUCTION

LEGEND

- ▨ LIGHT TRAFFIC THROUGHFARE
- Ⓟ TREE PLOT
- Ⓜ 90° ANGLE PARKING
- Ⓞ 'GIVE-WAY' SIGNS
- Ⓢ HUMP/RAISED NARROWING
- Ⓚ KERB EXTENSION
- Ⓚ KERB EXTENSION (TWO-WAY)
- Ⓚ KERB EXTENSION (FOUR-WAY)
- Ⓛ LINEMARKING
- Ⓜ MEDIAN
- Ⓝ NARROWING OF ROADWAY
- Ⓟ PRIORITY REVERSAL
- Ⓡ ROUNDABOUT
- Ⓢ 4 WAY 'STOP' SIGNS
- Ⓣ THRESHOLD (SMALL)
- Ⓣ THRESHOLD
- Ⓜ WIDENING OF ROADWAY
- Ⓜ SCHOOL CROSSING TREATMENT
- Ⓝ ROAD CLOSURE

Figure 5 Proposed 40 Km/h Local Traffic Area Zone in Wickham



Legend:

- - - - - - Existing 40 km/h Local Area speed limit
- - - - - - Proposed 40 km/h Local Area speed
- - Stewart Avenue 60 km/h speed limit
- - Local Road existing 50 km/h speed limit



6.2 Traffic Assessments by Street

The following sections will discuss existing and proposed options in each street.

6.2.1 Station Street

Station Street is currently in transition stage from old to new road re-alignment/re-configuration. As part of the Wickham Transport Interchange, Station Street will become one-way traffic flow westbound from Charles Street to Union Street and two-way traffic flow from Union Street to Railway Street. Pedestrian crossings with raised thresholds will be installed at each end of Station Street (at Charles Street and Railway Street) to provide continuity of pedestrian pathways to and from the local area and Wickham Station. A lift will be provided with an overhead bridge at the western end of Station Street just east of Railway Street for pedestrians and cyclists to cross the railway line and continue along Railway Street towards Hunter Street.

Railway Street was closed to pedestrians and vehicles on 26 December 2014 when the railway line was cut at Wickham. The new conceptual layout of Station Street from Charles Street to Railway Street is shown in **Annexure B**.

No recent counts were conducted in Station Street due to the current road configuration (currently half road closure due to construction of the Wickham Transport Interchange). It is anticipated that a reasonable volume of traffic will use Station Street with traffic generated from the Wickham Interchange, resident traffic and future traffic from new developments in Charles Street and Railway Lane.

To address speed in Station Street, raised thresholds with pedestrian crossings (or wombat crossings) at both ends of Station Street will constrain speed in this location. With short term parking for drop off and pick up, there will be intermittent stopping of cars along Station Street which will further slow traffic.

6.2.2 Railway Street

Wickham comprises a mix of residential and industrial land use zones. Railway Street has a frontage of various industrial businesses with about 9% of heavy vehicle traffic (refer to **Table 1**).

Railway Street south of Greenway Street carried an average of 3,500 vpd in 2014 before the railway line was closed. Traffic counts conducted in 2016 recorded an average of 2,365 vpd. Railway Street still caters for a number of heavy vehicles that access businesses in Lindus, Throsby, Church and Greenway Streets. Turning movements for these vehicles in and out of the intersections should be maintained.

The average speed recorded in Railway Street is 40 km/h whilst the 85th percentile speed is 50 km/h. Speed humps could be considered but a pedestrian crossing with raised threshold or pedestrian refuges are proposed for consideration as this will assist pedestrians to cross the road and connect with properties east and west of Railway Street.

Entering and exiting Railway Street at the Albert Street intersection became more difficult due to the increased traffic in Albert Street. A roundabout is proposed at this intersection to assist heavy vehicle turning movements and to assist pedestrians to cross the road in two stages, particularly in Albert Street. The proposed roundabout will be funded by Transport for NSW as part of the Wickham Transport Interchange (WTI) project. The WTI will generate a number of vehicles and the roundabout will assist these vehicles to use Albert Street instead of using the local streets of Wickham.

The Wickham Master Plan recommends installation of traffic signals at Railway Street and Albert Street, which will be considered when the roundabout at Hannell Street and the Cowper/Branch Street intersection is changed to traffic signals. Current traffic volumes do not warrant traffic signal control at the intersection of Railway and Albert Streets.

6.2.3 Railway Lane

Railway Lane caters for a small number of properties and access to the RailCorp land near Wickham Park. A Development Application (DA) has been lodged for property number 73-79 for a multi storey residential building with ground floor commercial frontages. The new building will generate traffic and pedestrian movements and a formal cul-de-sac arrangement is recommended with kerb and guttering on both sides of the lane. Kerb ramps are also recommended on Railway Lane at the intersection of Station Street to provide continuity of the pedestrian pathway from the new development to Station Street and the WTI. There is no available width for construction of a footpath on the southern side of the lane.

6.2.4 Charles Street, Bishopsgate Street and Dangar Street

Charles Street between Dangar and Station Street is recommended to be a one-way street as part of the Station Street road re-configuration. Charles Street between Dangar and Bishopsgate Street is 10m wide and will be maintained as two-way traffic so residents and businesses in Charles Street and Dangar Street can easily access Hannell Street.

The property lots at 12 Bishopsgate Street and 13 Charles Street have a DA for a multi-storey residential and commercial building. These developments will generate pedestrian traffic. To provide continuity of pedestrian flow in the

Wickham area it is recommended to install a raised threshold and pedestrian crossing in Charles Street south of Bishopsgate Street.

The half road closure of Bishopsgate Street is sub-standard. It is recommended this be rebuilt with median islands and plantings to increase residential amenity.

Bishopsgate Street is narrow between Railway Street and Hannell Street. It is likely additional traffic when the WTI is opened will occur, when a number of vehicles will use the street to exit to Hannell Street. A speed hump is proposed between Union Street and Charles Street.

6.2.5 Grey Street, Dickson Street and Lindus Street

The Grey and Dickson Street one-way traffic flow works with Grey Street westbound traffic and Dickson Street eastbound traffic. The current traffic flow arrangement provides efficient ingress/egress for Grey and Dickson Street residents. Speeding is not an issue due to the narrowness of the road however; residents are concerned that cars drive the wrong way from Union Street to Grey Street. It is recommended kerb extensions be provided as an entry/exit treatment to the local area. Pavement one-way arrows are also recommended in Grey and Dickson Streets to reinforce the one-way traffic system which may be implemented immediately.

Lindus Street has mixed land uses consisting of a few residential and commercial properties. The street is 12.8 metres wide and about 150 metres long between Railway and Union Street. To discourage speeding and Lindus Street being used as a short cut from Railway Street to Dickson Street, it is proposed to narrow the corner at the intersection of Lindus and Union Street. This will also narrow the width of Lindus Street for pedestrian use.

6.2.6 Union Street

Union Street between Station and Throsby Streets is narrow with a road width of approximately 10 metres and with parking on both sides of the street. The road narrows to about 8.0 metres between Lindus and Grey Streets due to an existing kerb extension.

Changing Union Street to one-way northbound only, between Station and Throsby Streets is feasible as the majority of traffic (76%) in Union Street is northbound. The extra width could be used to widen the footpath to cater for a shared cycleway/pedestrian path from Station Street to Throsby Street.

GLOW members made representation to Council mid 2016 to ban the right turn movement from Station Street to Union Street. The request has merit as there is a possibility that drivers pick up/drop off people fronting the WTI it is a shorter route to turn right into Union Street and proceed to either Bishopsgate or Throsby Street and be assisted by the lights to turn right and head south.

Banning the right turn to Union Street will encourage traffic in Station Street to proceed to Railway Street then to Throsby Street or Albert Street.

The residents of Union Street, between Bishopsgate Street and Station Street, will use using Grey, Lindus, Railway and Station Streets to access their properties from the south.

Council supports introducing a right turn ban from Station Street to Union Street.

Union Street between Throsby Street and Church Street narrows, decreasing in road width from 9.2m to 6.8m between Throsby and Church Streets. Residents requested turning Union Street at this location into a one-way southbound traffic flow. Northbound traffic could use Church Street. Changing Union Street to one-way may retain parking on both sides between Church Street and the laneway.

6.2.7 Throsby Street and Lee Terrace

Throsby Street is the local business centre of Wickham. Some DA's have been recently approved with construction shortly commencing. Residents are requesting Council to increase residential amenity in the area, particularly Throsby Street as the current development with shops, pubs and bottle shops, is attracting more pedestrians. The speed survey showed that cars travel an average of 33 km/h in Throsby Street and the 85th percentile speed is 42 km/h.

The residents' are concerned with pedestrian connectivity along Throsby Street. There are commercial developments and no pedestrian facilities to assist them from one commercial business to another on the opposite side of the road.

It is recommended that a raised pedestrian crossing between Hannell Street and Union Street be provided to connect pedestrians between the northern and southern developments. A speed hump is also recommended east of the bottle shop to slow traffic and increase local amenity in the local neighbourhood centre.

Lee Terrace is the laneway parallel to Church and Throsby Streets. It is an unnamed lane in Council's official records but for many years it has been known as Lee Terrace by the residents.

Lee Terrace between Hannell and Union Streets is two-way traffic however most residents use it as a one-way eastbound traffic flow (from Union Street to Hannell Street). Residents park on either side of the laneway which leaves just enough width for one car to pass through. There were requests from residents to formalise this laneway to a one-way traffic flow and remove all parking so there is room for pedestrians.

Currently, one development (southern side) has built a narrow footpath in front of the building as part of the DA condition of consent. Other new developments may follow suit to provide protection for pedestrians walking along the laneway.

6.2.8 Church, Greenway and Foundry Streets

Church, Greenway and Foundry Streets are local roads in Wickham having a mix of residential and commercial zones. The property at 90 Church Street is at the DA stage for a multi storey residential development with commercial purposes on the ground level. The road width in Church Street is 10.5m with Greenway and Foundry Street ranging from 9.5m to 10m. There were suggestions to change the traffic flow of these narrow streets to one-way. However, these widths can carry two-way traffic in a slow speed environment. Parking on both sides of the road will naturally calm traffic. Changing the traffic flow to one-way will unnecessarily divert residential traffic to other streets. The traffic volume for these streets is an average 700 - 1,000 vehicles per day which is well within the desirable traffic volume limit for local roads.

Given increased development in the area, a pedestrian crossing facility will assist pedestrians to cross Church Street between the north and south. However, the pedestrian crossing warrant will not be met at this stage and a kerb extension is recommended in Church Street west of Union Street.

Church Street is recommended to become a one-way traffic flow westbound to include a cycle lane from Hannell Street to Railway Street in the future. This will encourage cyclists to use Church Street instead of Throsby Street which has higher vehicle traffic.

6.2.9 Albert Street and Branch Street

Council has received a number of concerns from Albert Street residents on speeding. The requests started when Railway Street was closed to traffic at the railway line. There was an increase in traffic volume along Albert Street since the closure of Railway Street at Station Street.

The traffic survey conducted in Albert Street west of John Street recorded an average speed of 50 km/h with an 85th percentile speed of 57 km/h. With average daily traffic of 4,314 vehicles per day (7 day period), 45% of traffic travels over the speed limit.

Vehicle class counts showed that 95% of traffic is small or medium size cars and 4.9% of traffic are heavy vehicles.

The proposed roundabout at Railway Street and Albert Street will assist in slowing down traffic in Albert Street. Median islands or pedestrian refuges will be installed on each leg of the roundabout to assist pedestrians to cross the road in stages.

The number of requests received concerning speeding also requested the installation of a pedestrian zebra crossing in Albert Street. Observations showed that a pedestrian zebra crossing is not warranted at this time. It is anticipated with the ongoing development in the area and increased pedestrian movements in Albert Street the pedestrian crossing warrant will be met in the next few years. It is recommended to widen the existing pedestrian refuge west of John Street to meet the current standard, and to install a pedestrian crossing with raised threshold when the warrant is met.

To slow traffic in Albert Street, a chicane traffic device could be recommended. This is another type of traffic calming device where a median island is built and traffic slows down to drive around it. However, this type of traffic calming device will remove parking in front of residences and may not be supported. Speed humps along Albert Street to slow down traffic may be an alternative treatment.

Albert Street between Branch Street and Hannell Street carries traffic in and out of the local area. There were concerns of traffic conflict at the intersection of Albert Street and Branch Street and calls for investigation of an intersection re-alignment. There were also suggestions to make Albert Street one-way traffic between Branch Street and Foundry Street.

The traffic count survey conducted in Albert Street west of Foundry Street recorded a total of 1,098 vehicles per day with 31% of traffic traveling eastbound (from Railway to Foundry Street) and 69% of traffic traveling westbound (Foundry to Railway Street). If Albert Street is changed to one-way, it would be a one-way westbound direction based on the volume of vehicles.

The proposed intersection layout of Albert Street at Branch Street is to extend the median island from Branch Street to Albert Street (see **Figure 7**).

6.9.10 Robert, Fleming, John, Annie, Arthur and Mary Streets

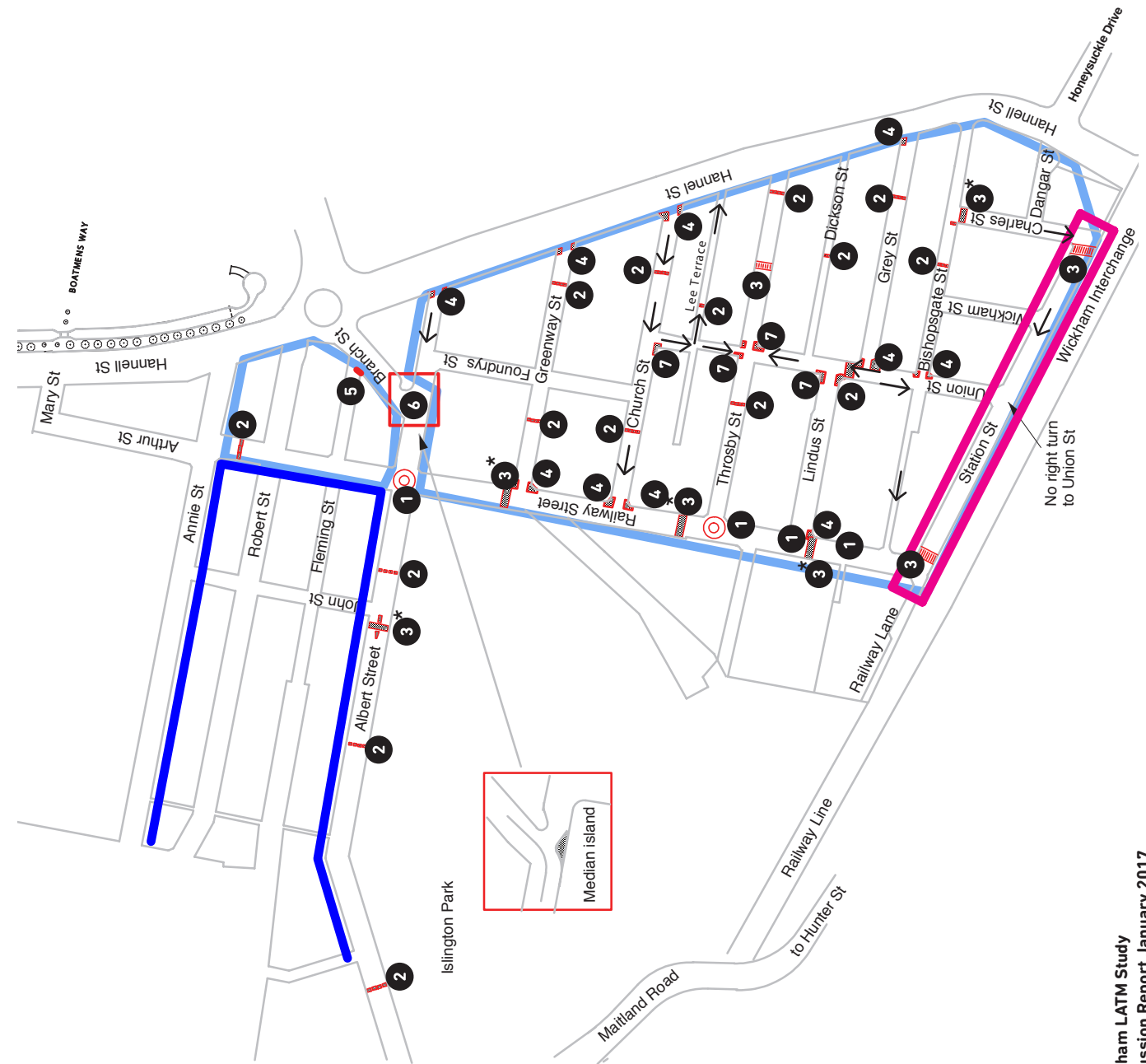
Robert, Fleming, John and Annie Streets west of Railway Street are part of the 40 km/h Local Traffic Area TWIM (Tighes Hill, Wickham, Islington, Maryville). Fleming, Robert, Annie, Arthur and Mary Streets east of Railway Street are not included and still have a default speed limit of 50 km/h. Inclusion of these streets is feasible for Local Traffic Area (40) and is included in **Section 6.1, Figure 5**.

Residents advised that Fleming Street between Railway Street and Branch Street is often used as a short cut. There is a request to close Fleming Street at the end of Branch Street. The traffic survey conducted in the street recorded an average of 642 vpd with an average speed of 33km/h and 41 km/h for the 85th percentile speed. The eastbound traffic in Fleming Street is 97% of the average daily traffic and westbound traffic is only about 3%. The majority of eastbound traffic exit at Branch Street. It is thus feasible to close Fleming Street for westbound traffic.

A full closure of Fleming Street is not supported at this time due to the low traffic volume using the street and as it also provides direct access for the residents of Robert and Fleming Street. However, a half closure is feasible allowing only eastbound traffic in Fleming Street.

Annexure C shows some Wickham street photos.

PROPOSED LOCAL AREA TRAFFIC MANAGEMENT (LATM) DEVICES FOR WICKHAM (Figure 6)



LEGEND

- 1 Roundabout
- 2 Speed humps or speed cushions
- 3 Raised threshold with pedestrian crossing and kerb extensions
- 4 Entry re-alignment to narrow road entrance in 40km/h local area with greening if possible
- 5 Half Road closure
- 6 Intersection re-alignment (see inset)
- 7 Kerb nibs
- Proposed one-way traffic flow
- Station Street one-way as part of the Wickham interchange Project (Annexure A)
- Proposed 40km/h local area zone (all roads within the dotted line is proposed to be 40km/h zone)
- Existing 40km/h local area zone

* This is a proposed raised threshold with pedestrian crossings to be installed once it meets the warrant for its installation.

7.0 Light Traffic Thoroughfare

A light traffic thoroughfare (LTT) is the identification of roads in suburban areas where if a weight restriction road sign is displayed a driver must not use that road if the total weight of the vehicle (including the load) is the same as or heavier than the weight which is shown on the sign, unless the street must be used to gain access.

In May 2015, signs for LTT's '5 Tonne and over' were approved and installed in Dickson, Grey and Bishopsgate Streets. Other streets were not included in the LTT plan due to the presence of mixed residential and light industrial land use zones, with some businesses attracting heavy vehicles.

The road geometric plan of Station Street fronting the WTI is currently designed to only cater for 8 Tonne vehicles and will be included in the LTT plan. Other streets in the Wickham area thought to be catering for heavy vehicles will not be included in the LTT proposal.

Albert Street from Maitland Road to Branch Street is recommended to be considered in the LTT plan with an 8 Tonne Load limit excluding garbage trucks and public transport vehicles. Albert Street caters for about 4.9% of larger vehicles (classified as truck/s). Larger trucks should not be travelling along Albert Street and should use Hannell Street and the Pacific Highway (Stewart Avenue) to proceed north or south. Albert Street is similar to Elizabeth Street, Tighes Hill between Kings Road and Maitland Road where a 5 Tonne Load Limit was introduced.

Figure 8 shows the extension of the LTT plan. The proposed plan will be exhibited for public comment.

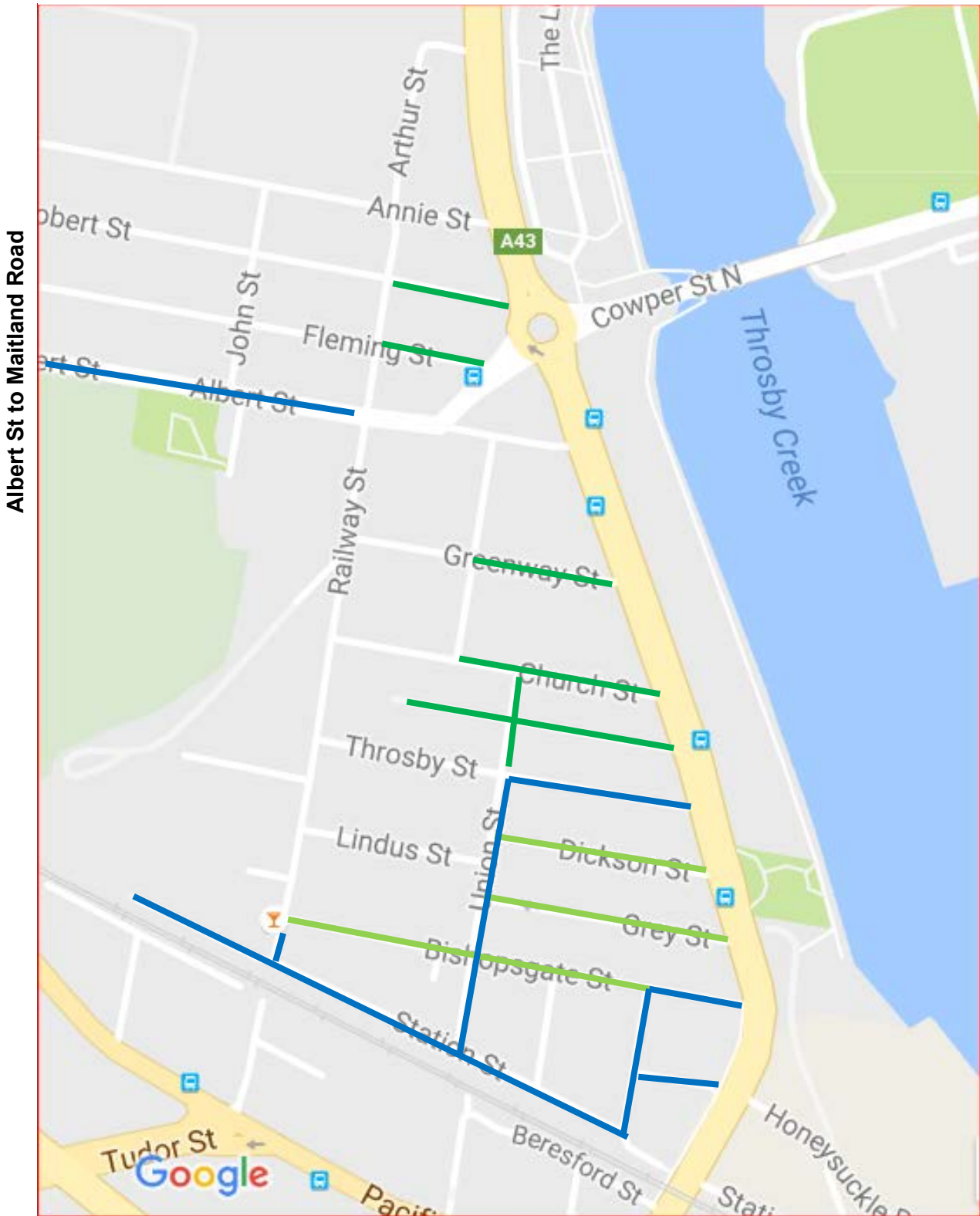
Initial discussion was held with the Mary Street Caltex Depot Operations Manager regarding heavy vehicles using Albert Street. An advice was sent to their contractor to use an alternative route to Albert Street for heavy vehicles.

8.0 Cycleway

The majority of roads in the Wickham area are narrow and have insufficient road widths for exclusive cycleway lanes. With the low traffic volume on most of these roads and the proposed 40 LTA, it is envisage that cyclists will command the lane. A shared cycleway is proposed on the northern side of Church Street between Hannell Street and Railway Street, and also on the eastern side of Union Street between Throsby Street and Station Street.

Other cycleway facilities in the area were considered and are proposed in detail in the Wickham Master Plan Study.

**Figure 7 Proposed Light Traffic Thoroughfare (LTT) in Wickham
(5 and 8 Tonne Limit)**



Legend:

- - Approved (Existing) LTT - 5 Tonne
- - Proposed additional LTT - 5 Tonne Limit
- - Proposed additional LTT - 8 Tonne Limit



Note: Railway Street from Bishopsgate St to Arthur St is an existing (approved) B-Double route

9.0 Where to from here?

The study discussion report will be available on Council's website for residents to access as part of the consultation process. Leaflets will be distributed to the residents of Wickham advising them of the proposed Local Area Traffic Management Scheme and a public workshop will be scheduled to meet residents and seek their views on the proposal.

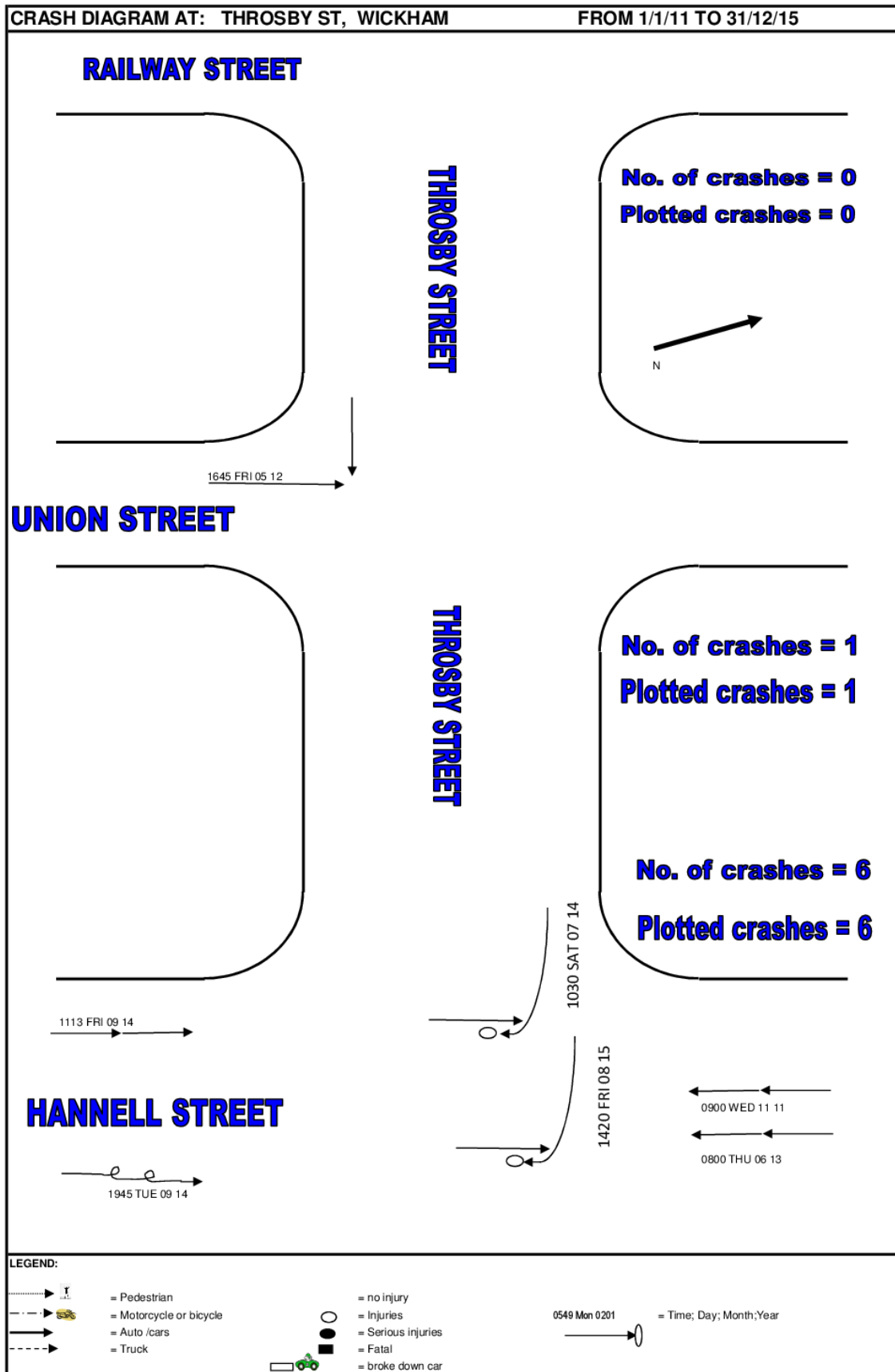
After the public workshop, a revised report will be prepared incorporating all comments and suggestions. A second round of consultation will be conducted to seek feedback on the revised plan. Following the second round of consultation, a finalised LATM plan will be developed for Council's consideration, determination and funding.

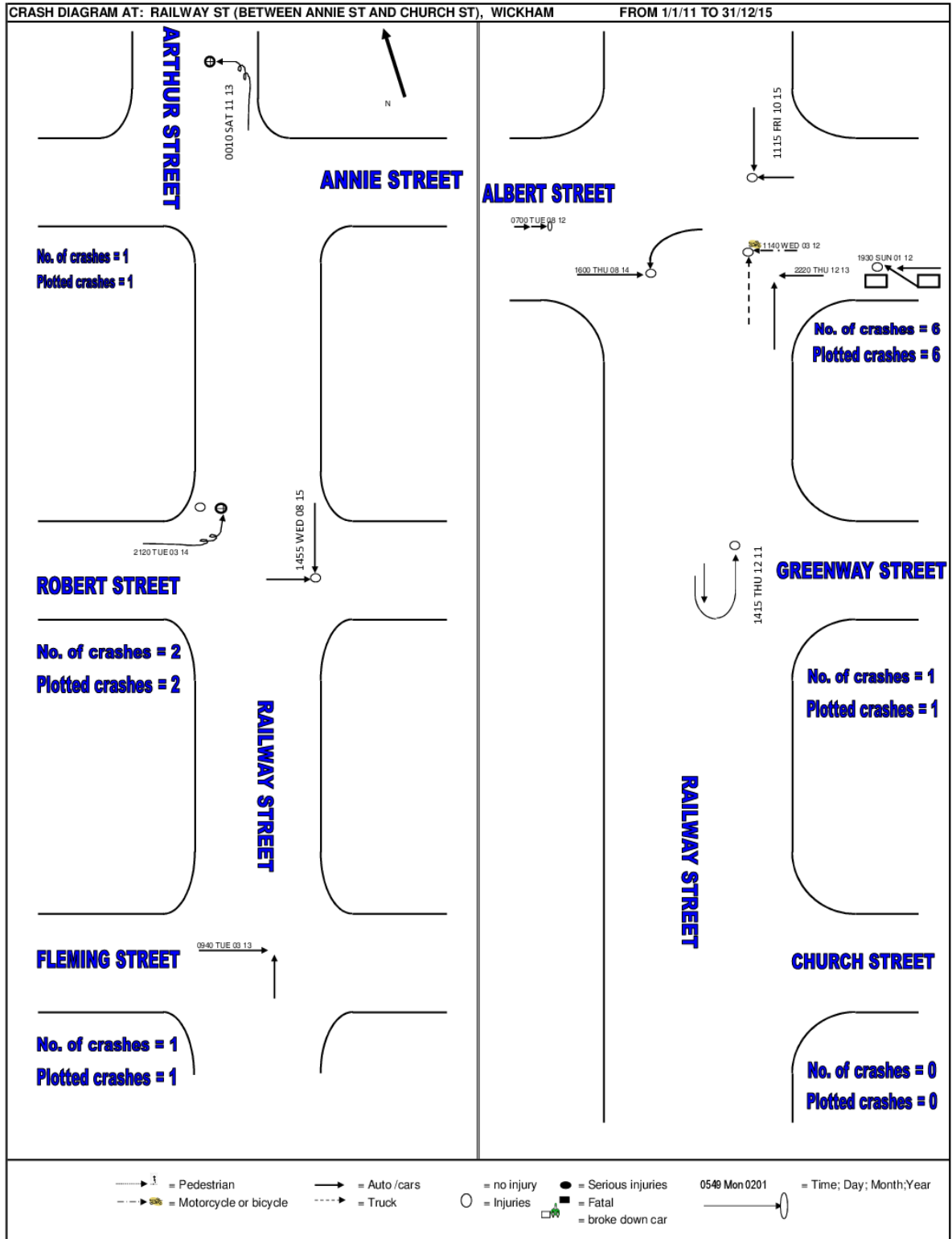
10.0 Recommendation

It is recommended that the proposed LATM study and plan be advertised for public comment and a public workshop be held with the residents prior to preparation of a report to Council for final determination.

ANNEXURES

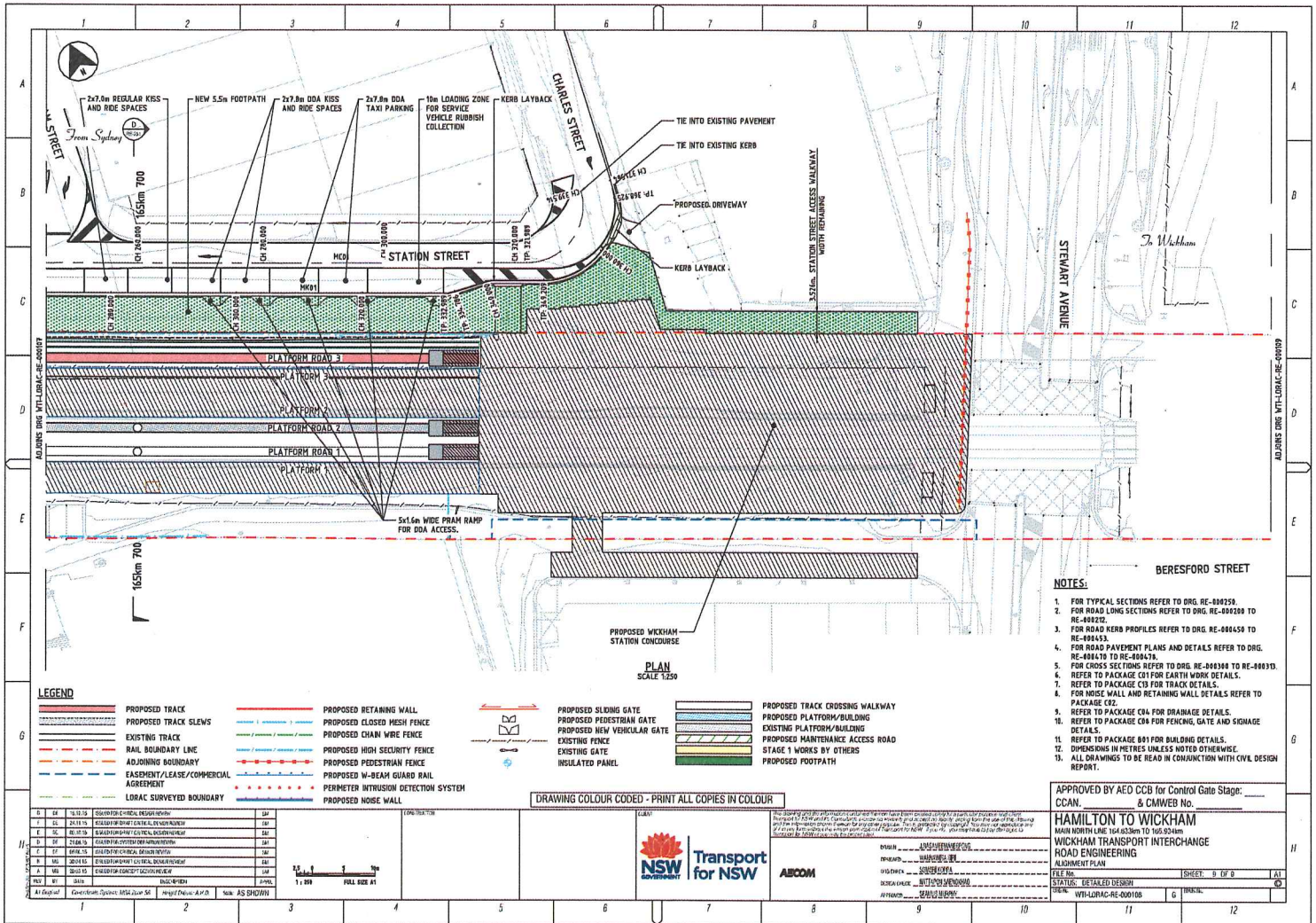
Annexure A Crash histories at various intersections in the Wickham area



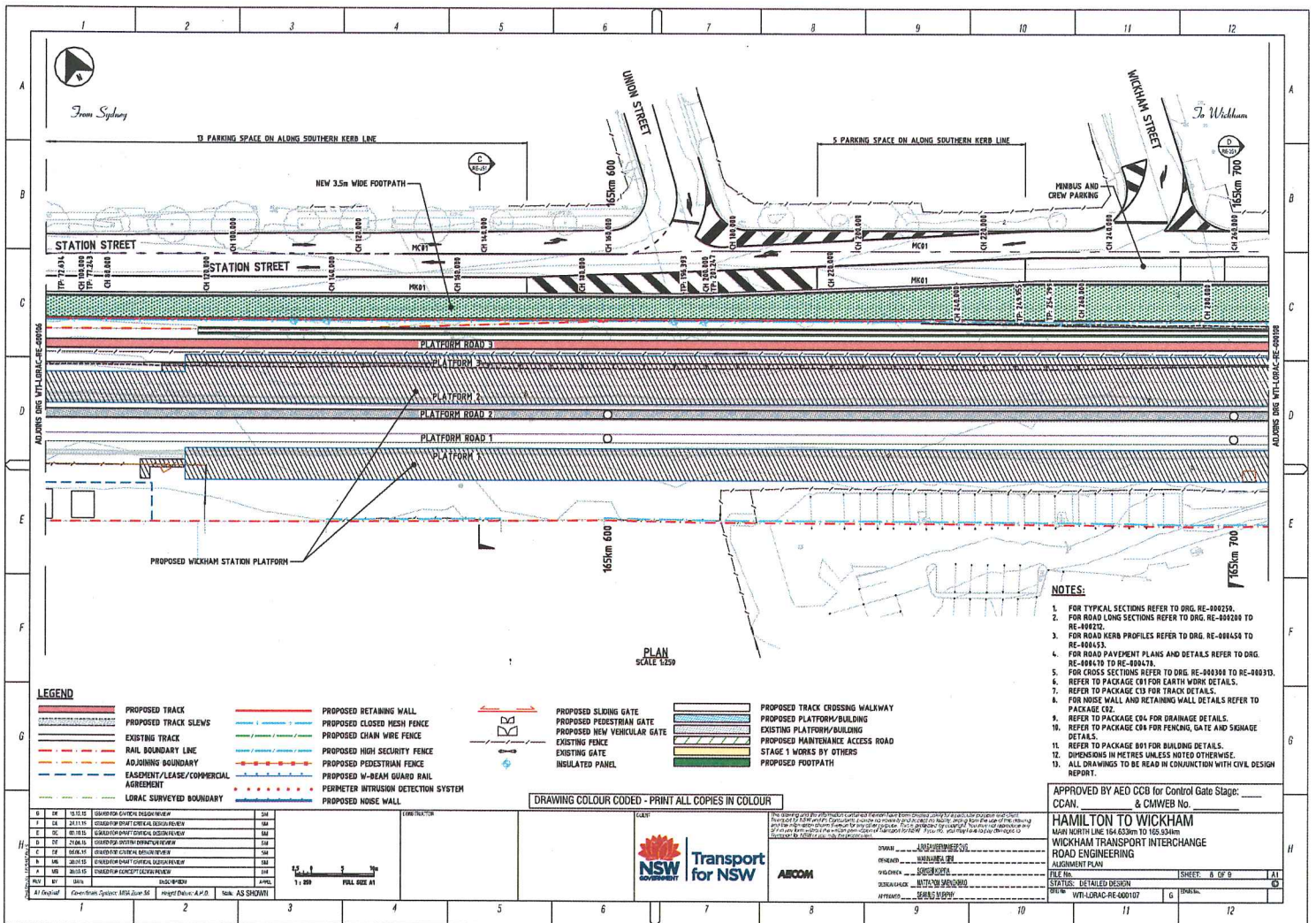


Annexure B - Station Street Conceptual Plan between Charles Street and Railway Street

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Annexure B - Station Street Conceptual Plan between Charles Street and Railway Street



Annexure C - Photos of various locations in the Wickham area



Photo 1: Station St looking east from Railway St



Photo 2: Railway St looking south to Station St



Photo 3: Railway St looking south from Throsby St



Photo 4: Bishopsgate St looking east to Union St



Photo 5: Grey St looking west from Day Care Centre position



Photo 6: Dickson St looking east from Union St



Photo 7: Union St looking south from Dickson St



Photo 8: Union St looking north from Throsby St



Photo 9: Throsby St looking west from Hannell St



Photo 10: Lee Terrace looking east from Union St



Photo 11: Lee Terrace looking west from Union St



Photo 12: Railway St looking north towards Fleming St and Robert St



Photo 13: Church St looking east from Union St



Photo 14: Greenway St looking west to Foundry St



Photo 15: Foundry St looking north from Greenway St



Photo 16: Albert St and Railway St intersection looking from Railway St towards south



Photo 17: Albert St looking west from John St



Photo 18: Fleming St looking west from Railway St