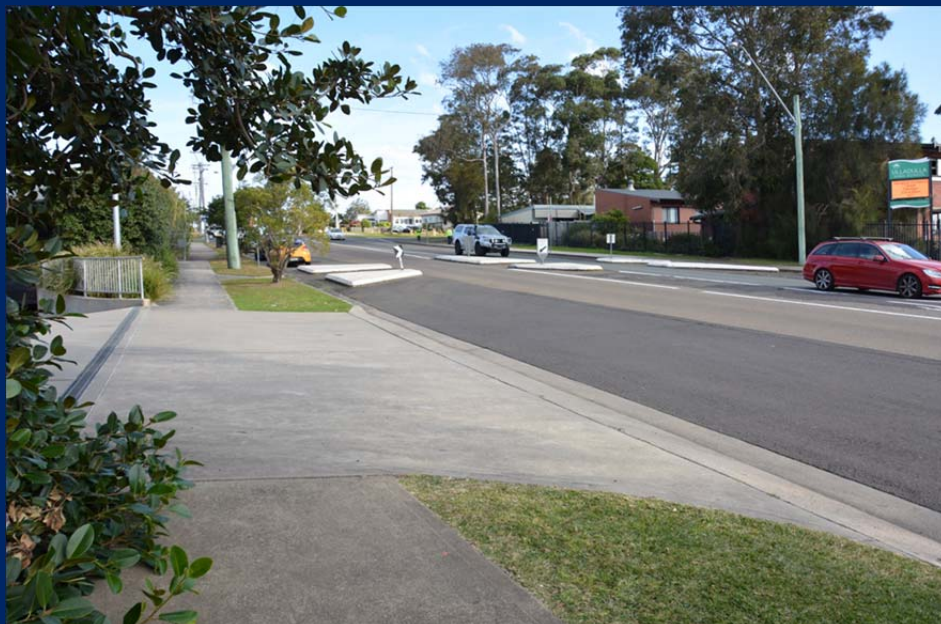


BUS SAFETY INVESTIGATION REPORT

PEDESTRIAN FATALITY

ULLADULLA NSW

1 JULY 2020



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Once OTSI has completed an investigation, its report is provided to the NSW Minister for Transport and Roads for tabling in Parliament. The Minister is required to table the report in both Houses of the NSW Parliament within seven days of receiving it. Following tabling, the report is published on OTSI's website at www.otsi.nsw.gov.au.

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EXECUTIVE SUMMARY

On 1 July 2020, a 14 year old student from Ulladulla was fatally injured after being struck by a bus. The student had left Ulladulla High School and was crossing St Vincent Street on the way home. The student was struck by a school bus which was making a left hand turn from South Street into St Vincent Street.

The investigation determined:

- The student stepped from the footpath, onto the road and into the side of the moving bus. It is highly likely that the student was unaware of the presence of the approaching bus.
- The actions of the driver did not contribute to the incident.
- An examination of the bus following the incident found the bus to be roadworthy and it was determined that the condition of the bus did not contribute to the incident.
- The student was not restricted from crossing at the location under NSW legislation.

Additional infrastructure work was carried out following the incident. This included improvements to signposting, line marking, delineation and traffic/pedestrian control. Other changes included providing marshals to direct students to use the pedestrian refuges, variable message signboards installed to display road safety messages, installation of look out stickers and banners and communications to students recommending that students cross at the pedestrian refuge facility.

OTSI has concluded its examination of the circumstances of this incident and has determined that it does not require further analysis or recommendations under the provisions of Section 137 of the *Passenger Transport Act 2014*.

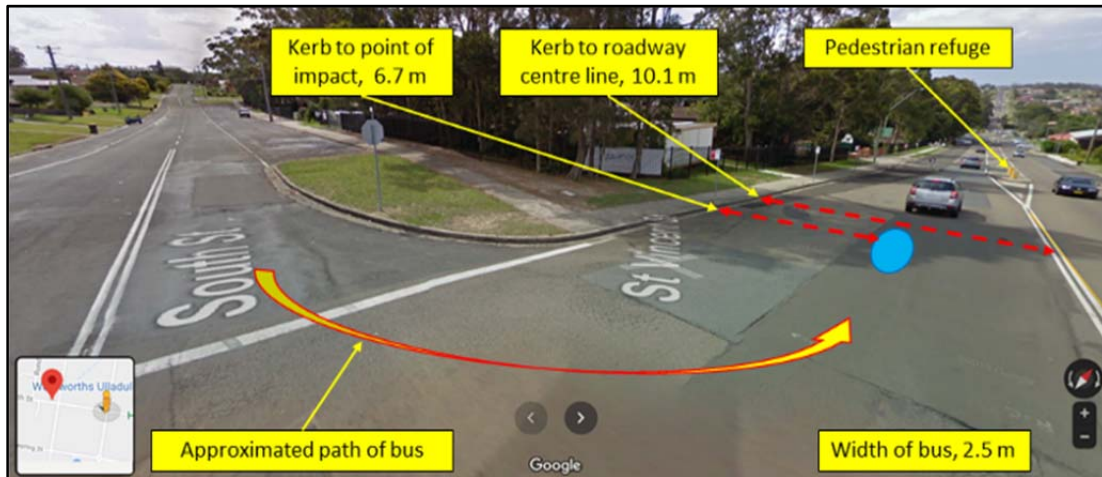
Full details of the Findings of this investigation are contained in Part 2.

PART 1 FACTUAL INFORMATION

The occurrence

- 1.1 At approximately 1510¹, on Wednesday, 1 July 2020 a dedicated school service operated by Kellam Buslines, identified as run N1464, departed the designated bus stopping bay adjacent to the entrance of Ulladulla High School on South Street. The bus was carrying approximately 15 Ulladulla High School students at the time of departure.
- 1.2 Shortly after negotiating a left hand turn from South Street into St Vincent Street, adjacent to the south eastern corner of the school grounds, the driver of the bus heard an impact noise.
- 1.3 The driver and several of the school students on board made comment that the bus had possibly struck something. The driver stopped the bus and observed a person laying on the roadway. The observation was made through the near side rear external rear vision mirror.
- 1.4 The driver called Triple Zero (000) on their mobile phone and requested emergency services to attend. The driver then instructed the students on board to remain on the bus.
- 1.5 NSW Police, Ambulance and Fire and Rescue attended the scene, however the 14 year old student was declared deceased at the scene.
- 1.6 The Ulladulla High School student was leaving school to return home which was within walking distance from the school.
- 1.7 Witnesses recalled that the student was crossing St Vincent Street, from west to east, approximately 16 m north from the intersection with South Street (refer *Figure 1*).
- 1.8 CCTV footage from the bus showed the student approach the left hand side of the bus from the footpath area adjacent to the school. The student was observed moving towards the side of the bus, forward of the rear wheels. After impacting the bus, the student then fell to the roadway and was run over by the bus.

¹ Times in this report are in 24-hour clock format in Australian Eastern Standard Time (AEST): Coordinated Universal Time (UTC) + 10 hours

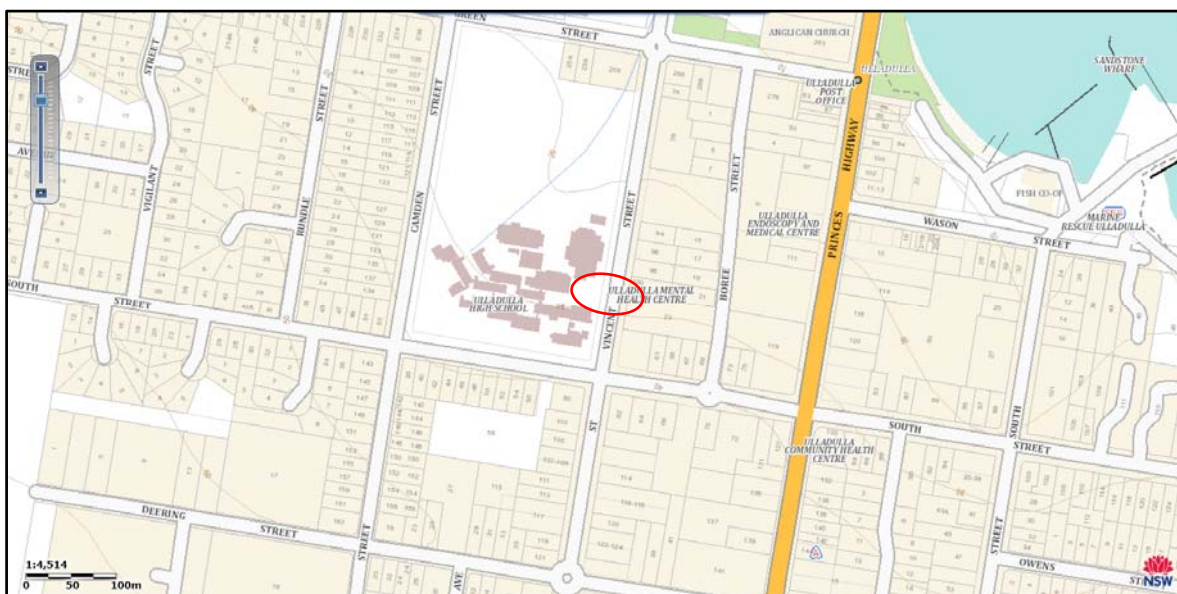


Source: Google Maps (Image Capture 2010), annotated by OTSI

Figure 1: Street view of incident location

Location

- 1.9 The incident occurred adjacent to the south eastern corner of Ulladulla High School. Ulladulla is situated in the Shoalhaven Local Government Area (LGA) approximately 225 km southwest of the Sydney CBD (refer to Figure 2).



Source: Six Maps, annotated by OTSI

Figure 2: Incident location map

- 1.10 The streets immediately surrounding the high school were designated as 50 km/h zones and during school zone times reduce to 40 km/h. The school zone times for the afternoon period are 2:30 – 4:00pm, which applied at the time of the incident. St Vincent Street formed a light vehicle bypass of the main thoroughfare for the Ulladulla Township.

- 1.11 The student was not restricted from crossing at the location under NSW legislation. Regulation 234 of the NSW Road Rules 2014 stipulate that a pedestrian must not cross a road within 20 m of a crossing for pedestrians. There was a designated pedestrian refuge approximately 50 m from the incident location. The school administration encouraged students to cross at this pedestrian refuge. Additionally, it is not compulsory for drivers to stop for pedestrians crossing at pedestrian refuges, unlike marked pedestrian crossings, refuges place the obligation on the pedestrian to cross safely (refer *Figure 3*).



Source: OTSI

Figure 3: Pedestrian refuge - St Vincent Street

Operator information

- 1.12 Kellam Buslines were based on the southern fringe of the Ulladulla township. The company provided dedicated school services for TfNSW Rural and Regional Bus Service Contracts under accreditation number 9960. Kellam Buslines had a mixed fleet of approximately 32 buses and coaches.

Bus information

- 1.13 The bus involved was a diesel fuelled 2018 model Volvo B8R. The body was manufactured by Volgren Australia Pty Ltd and was registered in NSW as 2078MO. Log book records showed that the bus had travelled approximately

43,756 km prior to the incident. Following the incident, the bus was quarantined by the NSW Police Accident Investigation Unit as evidence and forensically inspected. There were no defects detected relevant to the incident.

- 1.14 The bus was authorised to carry 58 seated adult passengers and up to 83 children due to seating configuration. Each of the 83 seats are fitted with seat belts. At the time of the incident there were approximately 15 school students on board.
- 1.15 The bus was fitted with a CCTV system that incorporates eight cameras. Six cameras were placed in varying positions within the passenger saloon area of the bus and two are mounted externally. One external camera was located above the driver's window area and the other external camera was above the front passenger door on the cant rail and faced rearward towards the roadway alongside the bus.
- 1.16 All cameras were operational at the time of the incident. The footage from the cameras was stored on a hard drive contained within the control unit of the system. The CCTV footage was retrieved by NSW Police following the incident.

Related occurrences

- 1.17 OTSI has conducted four investigations into incidents involving fatalities of school aged children. These were:
 - Rutherford, 20 June 2007
 - Ingleburn, 5 August 2009
 - Rocky Point, 26 April 2017
 - Coolagolite, 8 August 2016.
- 1.18** In the three most recent instances the children were fatally injured following alighting from a designated school service. These reports can be viewed on the OTSI website.²

² <https://www.otsi.nsw.gov.au/bus/investigations>

Additional safety actions

1.19 Meetings were conducted on-site on 2-3 July, 2020 and included representatives from:

- OTSI (observer),
- Transport for NSW (TfNSW), Regional and Rural Service Delivery and Performance,
- TfNSW, Centre for Road Safety,
- TfNSW, Southern Region Journey Management,
- Shoalhaven City Council, and
- Ulladulla High School.

1.20 The meetings discussed the following topics:

- Pedestrian movements in and around the incident scene and the adjacent intersection,
- Bus and traffic movements in school zone times,
- Historical occurrences,
- Roadway and footpath design and layout, and
- Protection devices for pedestrian traffic.

1.21 As a result of these meetings, a number of proposed actions were put forward by the TfNSW Centre for Road Safety representatives. These included:

- Signposting, line marking, delineation and traffic/pedestrian control improvement recommendations as follows:
 1. Via a Traffic Control Plan, temporary water filled barriers to be installed as an interim pedestrian barrier, on the northwest and northeast corner of the intersection, to corral pedestrians toward the refuge facility.
 2. Installation of edge lines, retro reflective pavement markers and chevron line marking along St Vincent Street from South Street to the pedestrian refuge.
 3. Installation of additional stop signs, including on the central median. Installation of a stop template on the road surface adjacent to transverse stop line.
 4. Update pedestrian refuge signs to fluorescent green standard.
 5. Removal of No Parking signs on the western side of St Vincent Street and replacement with No Stopping signs.
 6. Removal of the loading zone to the north of the pedestrian refuge along St Vincent Street and replacement with No Parking signs

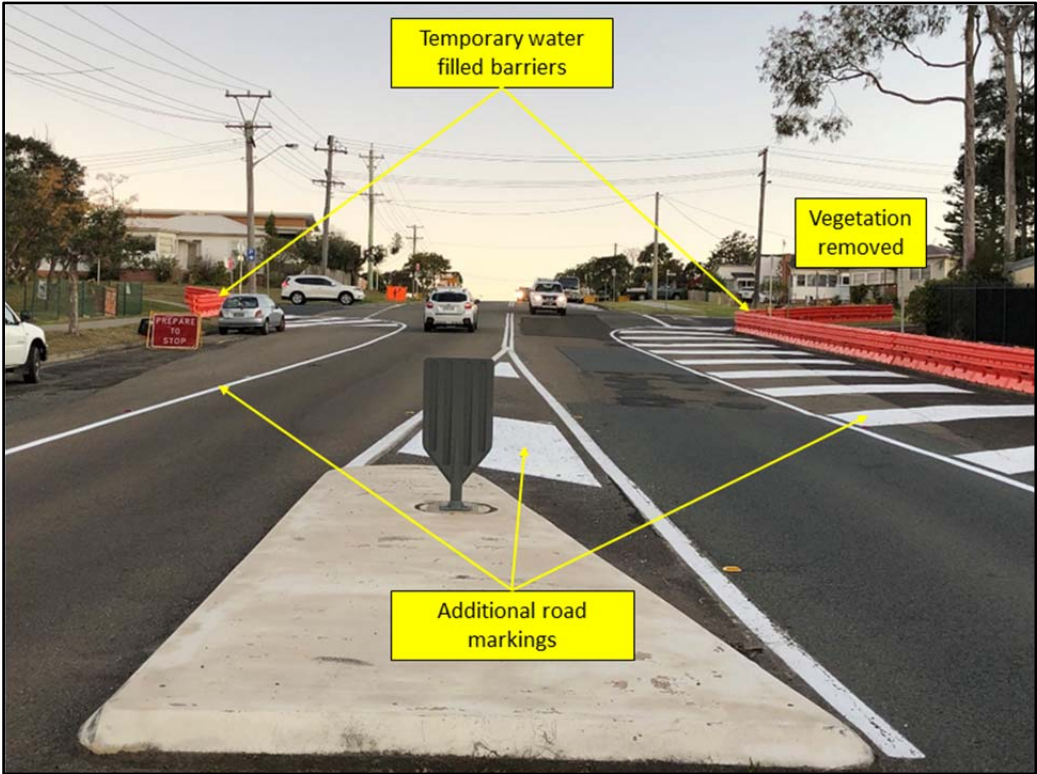
7. Removal of vegetation on the northwest corner of South Street and St Vincent Street to improve visibility in the vicinity of the intersection.
- Behavioural and Communication Strategy Recommendations
 1. The school to provide marshals to direct students to use the pedestrian refuges.
 2. Variable message signboards to be installed to display road safety messages.
 3. Look out stickers and banners to be installed.
 4. School Principal to communicate road safety messages via newsletters to all students to utilise the pedestrian refuge facility.
 5. Possibly engage local media outlets to promote road safety.
 - Road Safety and Traffic Management recommended improvements include:
 1. Upgrade the pedestrian refuge on St Vincent Street at Ulladulla High School to a pedestrian crossing on flat top road hump with kerb extensions.
 2. Remove the pram ramp at the northeast corner of St Vincent and South Streets.
 3. Install pedestrian fencing on the northeast and northwest corners of the intersection of South and St Vincent Streets in order to corral pedestrians to the current pedestrian refuge.

Figures 4, 5, 6 and 7 indicate the incident site and the additional work carried out following the incident.



Source: OTSI

Figure 4: View of St Vincent Street facing south toward incident location



Source: OTSI

Figure 5: Incident site following additional work (facing south)



Source: OTSI

Figure 6: Incident site following additional work (facing north)



Source: OTSI

Figure 7: Additional work carried out at intersection

PART 2 FINDINGS

From the evidence available, the following findings are made with respect to the pedestrian fatality at Ulladulla, NSW.

Contributory factor

- 2.1 The student stepped from the footpath, onto the road and into the side of the moving bus. It is highly likely that the student was unaware of the presence of the approaching bus.

Additional findings

- 2.2 The actions of the driver did not contribute to the incident.
- 2.3 An examination of the bus following the incident found the bus to be roadworthy and it was determined that the condition of the bus did not contribute to the incident.
- 2.4 The student was not restricted from crossing at the location under NSW legislation.