



**Stockton-on-Tees**  
BOROUGH COUNCIL

**ECONOMIC GROWTH AND  
DEVELOPMENT SERVICES**

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**DUKE STREET/LARCHFIELD STREET**

**ROAD SAFETY ASSESSMENT REPORT**

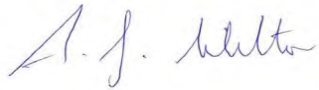




# Stockton-on-Tees

BOROUGH COUNCIL

## Duke Street/Larchfield Street

## Road Safety Assessment

<b>Date</b>	<b>27.03.19</b>		
	<b>Prepared by</b>	<b>Checked by</b>	<b>Approved by</b>
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**Stockton-on-Tees**  
BOROUGH COUNCIL

**Duke Street/Larchfield Street**

**Road Safety Assessment**

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## 1 Introduction

- 1.1 This report details the results of a Road Safety Assessment of the junction of Duke Street and Larchfield Street in Darlington.
- 1.2 The road safety assessment team consisted of Anthony Wilton Principal Engineer and John Angus Project Officer who undertook a day and night site meeting on Thursday 21<sup>st</sup> and Tuesday the 12<sup>th</sup> of March 2019 respectively. Weather conditions during the day site visit were overcast whilst the road surface was dry.
- 1.3 The road safety assessment was undertaken in accordance with the brief provided by Paul Ibbertson, Traffic Manager. A list of information provided has been provided as appendix A to this report.

## 2 Site Description

- 2.1 Duke Street is a single carriageway road broadly running on an east to west alignment, subject to 30mph speed limit. Duke Street provides access to both residential and commercial properties, and is an important bus route. There are parking bay located on the south side and parking restrictions on the north side.

Larchfield Street is a single carriageway road broadly orientated in a north to south alignment, subject to a 30mph speed limit and provides access to residential properties.

The cross road junction is controlled through give way road markings and signage on Larchfield Street and is traffic calmed. The junction is bounded by four commercial properties, with guard railing surrounding the footway around the junction. The south side of the junction has been built out with the junction in line with the parking bays on Duke Street.

- 2.2 The collision history shows there have been eight reported road collisions at the junction between 2014 and March 2019, two serious and six slight. A breakdown of the collisions are as follows:
  - Four collisions involved vehicles approaching the junction from the south on Larchfield Street (Two overshooting the give way and two loss of control when turning right).
  - Three collisions involved vehicles approaching the junction from the north on Larchfield Street (one overshooting the junction, one shunt and the remaining collision involved the overhanging load striking another vehicle as it turned onto Duke Street).
  - The remaining collision involved a driver travelling west along Duke Street and turning left onto Larchfield Street and colliding with a pedestrian crossing the south arm of the junction.

The collisions occurred at various times of the day and predominantly during fine weather.

There have also been several damage only road collisions during this period.



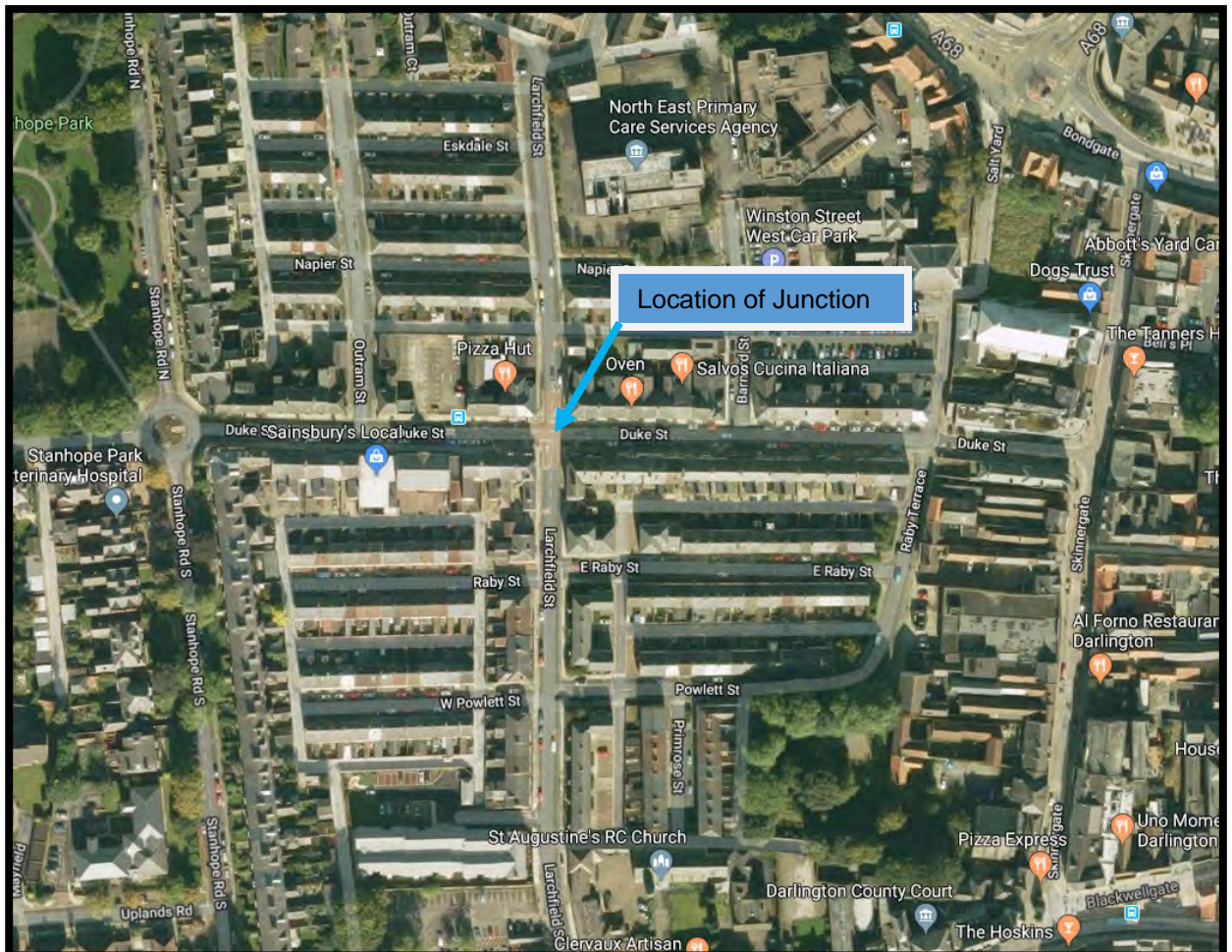
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## Road Safety Assessment

- 2.3 The traffic data provided is from a speed surveys carried out in June 2018 and April 2019. on Larchfield Street and . The combined 85<sup>th</sup> percentile speed was 29mph and 25mph on Larchfield Street (north of the junction of Powlett Street) and Duke Street (west of Outram Street) respectively.



## 3 Findings

Duke Street has a mixture of shops and eateries with an assortment of pedestrians, cyclists and motorised road users. Below are the findings and possible issues that could increase the risk of road collisions.

### 3.1 Parking

During the day site visit drivers were observed parking illegally on the “no waiting at any time” restrictions on the north east side of the junction. The majority appeared to be visiting the hair salon and were parked for the full length of the site visit.

During the night site visit drivers were parked along the majority of the north side of Duke Street, predominantly on the single yellow line (restrictions 8am to 6pm), a small number were parked illegally on the “no waiting at any time” restrictions.



The parking on the north side of Duke Street could result in the following issues:

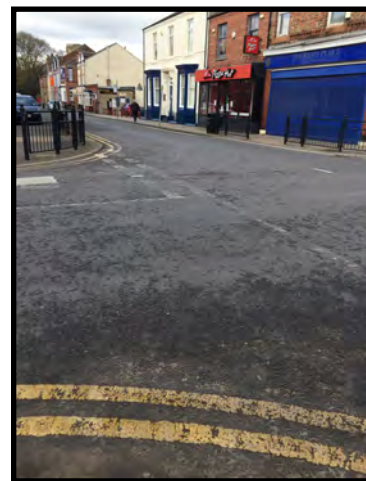
- Inadequate inter-visibility between road users on Duke Street and road users exiting Larchfield Street (southbound).
- Insufficient width to allow two way movements on Duke Street and limited passing opportunities which may result in an increase in vehicles reversing.

### 3.2 Signage and road markings.

There are slow road markings on all the approaches adjacent to the hump warning sign ahead. On both the northbound and westbound approaches the slow markings are reinforced with red surface dressing.

The hump warning sign on Duke Street (westbound) appears to have lost its reflectivity and is incorrectly aligned. Both the hump warning signs on Duke Street may be obstructed by either a bus or parked vehicle in the parking bay on the eastbound and westbound approaches respectively. This could lead to the warning signs being missed and may result in higher approach speed at the junction.

The give way signs on both approaches are lit and in good working order. The give way road marking on Larchfield Street (northbound) have become partially worn. This could lead to drivers failing to give way at the junction; two of the road collisions on this approach, involved drivers failing to give way at the junction.



### 3.3 Traffic Calming

The junction is currently raised. However the gradient of the ramps to the table top on all approaches are gentle due to the carriageway levels.

The approaches on Larchfield Street are relatively straight, which can lead to higher vehicle speeds, and the gentle ramps of the table top are unlikely to significantly reduce vehicle approach speeds.



This may lead to drivers failing to give way at the junction, three of the collisions involved drivers failing to stop at the give way and one collision was the result of the second vehicle in the queue failing to stop and caused a shunt type collision.

## 4 Recommendations

Collisions are more likely to occur at points of greatest conflict which usually means some form of junction. This report is based upon a risk assessment process and there is no measure of success achieved by any recommendation. Since road collisions are rare events and are largely caused by factors outside of engineering influence, such as driver and pedestrian behaviour and to a lesser extent vehicle condition.

### Phase 1

- 4.1 Introduction of “no loading at any time” restrictions on the north side of Duke Street at the junction of Larchfield Street to ensure minimum inter-visibility of 43m (Manual for Streets) is maintained between road users on major and minor arms of the junction.
- 4.2 Extension of the guard rail on the north side of Duke Street to reinforce the “no loading at any time” restrictions.
- 4.3 Provide adequate opportunities on the north side of Duke Street to allow two way traffic to pass after 6pm and vehicles can legally park on the north side of Duke Street.
- 4.4 Refresh the road markings at the junction and provide yellow backing boards for the “give way” signage on both Larchfield Street approaches.
- 4.5 Provide additional traffic calming measure on both Larchfield Street approaches to reinforce the table top junction.



**Phase 2**

If following a review period of at least 6 month of the above measures the collisions continue at this junction then suggest the subsequent measures are considered.

- 4.6 Resurface the junction with a red colouring to help reinforce the junction. Example below which shows the change in contrast.



- 4.7 Introduce a one way system on Duke Street between Larchfield Street and Raby Terrace (eastbound only). This would also require junction improvements at Duke Street/Raby Terrace and Powlett Street/Larchfield Street to facilitate the additional traffic movement. The one way system would allow for the eastern section of Duke Street to have formalised parking on the north side.

**5 Appendix A**

**Documents:**

Accident Report  
Accident Plan  
Vision Zero Report





## 6 Phase 1 Suggested Measures Plan





### 7 Phase 2 Suggested Measures

