

PREPARED ON BEHALF OF GROUNDSOLVE LTD

A616 NEW MILL ROAD PARAPET  
BROCKHOLES DEVELOPMENT, LANCASTER LANE

INSPECTION AND ASSESSMENT REPORT

REPORT REF. 891010-WCL-XX-XX-RP-C-0001



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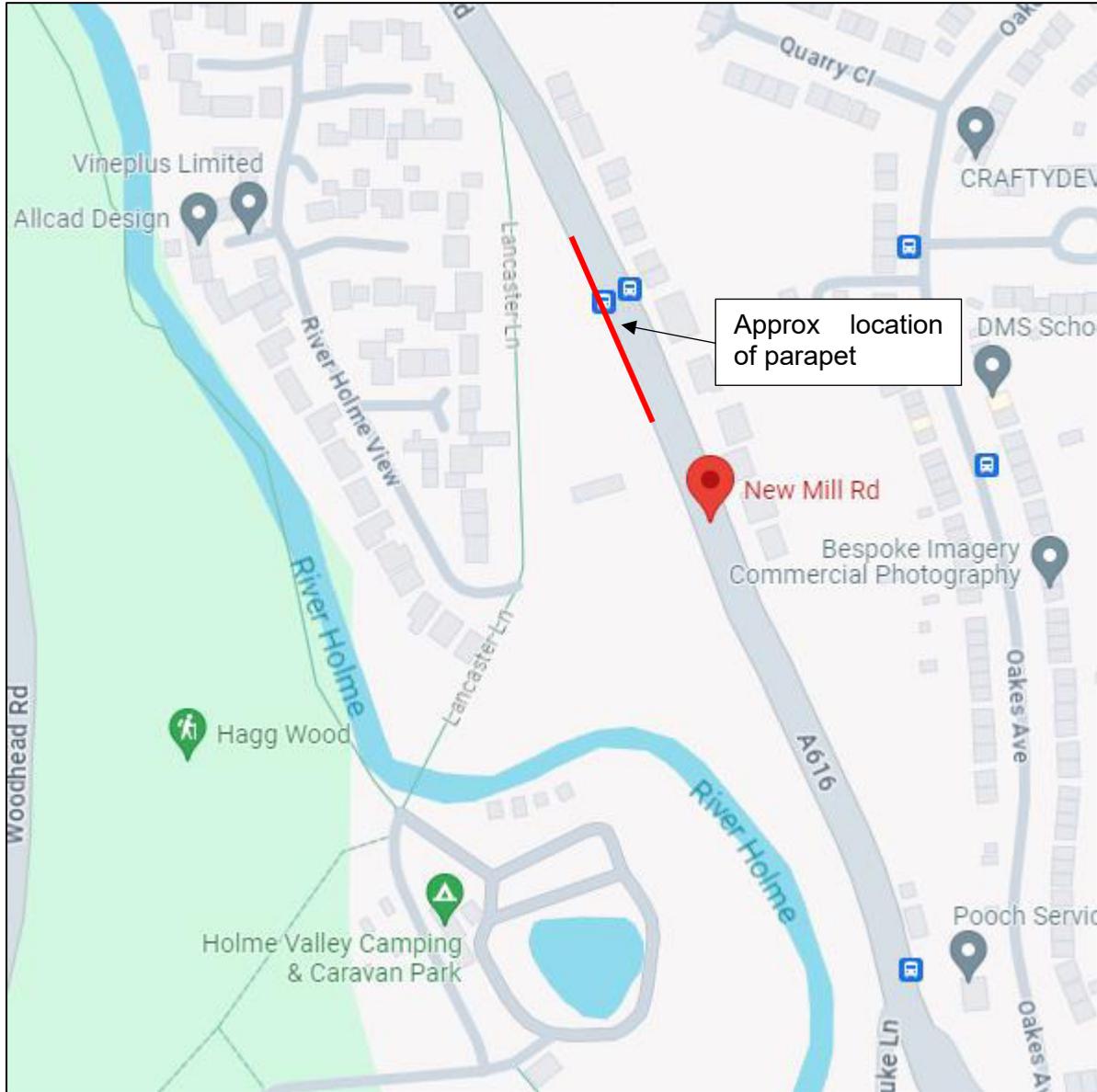
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## LOCATION PLAN



## **EXECUTIVE SUMMARY**

Wilde Consultants Ltd (WCL) were engaged by GroundSolve Ltd (GSL) to undertake an inspection and assessment of an existing stone masonry parapet along the A616 New Mill Road in Brockholes.

The parapet which is 118m in length is adjacent to the proposed Brockholes development site. Retaining walls are proposed on the eastern perimeter of the site to allow the proposed housing development. It is the intention that the existing parapet will remain in place.

The parapet wall is of mortared masonry construction with a stone masonry capping. The pointing is recessed to give the appearance of a drystone wall. The width of the wall considered in the assessment tapers from 420mm at back of footway level to 300mm at top of capping. The average height of the parapet above back of footway level is 1100mm.

An assessment in accordance with BS8779:2022 is required to confirm the following;

1. the suitability of the existing masonry wall to contain an errant vehicle,
2. the risk associated with projectile masonry following vehicle impact and taking account of the layout of the proposed Brockholes development by undertaking a FAR (fatal accident rate) risk assessment.

To inform the above assessment WCL undertook an inspection of the existing parapet wall on the 29<sup>th</sup> February 2024.

The wall was generally found to be in a good condition with areas of ivy growth and a single area of localised collapse.

For the purposes of the assessment, it has been assumed that the area of collapse will be locally rebuilt by the asset owner.

In undertaking the assessment, it has been assumed that any retaining walls or other construction undertaken as part of the Brockholes development will not be detrimental to the foundation of the existing parapet.

The sign posted speed limit is 30mph and a speed camera is located directly adjacent to the wall. Therefore, the road speed has been considered to be 30mph.

The assessment confirms that the parapet is adequate to contain an errant vehicle.

The extent of debris spread in the event of a vehicle impact is between 9.5m and 12m depending on the location of impact. This extent would extend into the proposed gardens and interface with the proposed properties.

A FAR risk assessment has been undertaken based on the information provided in Paragon Highways Accident Summary Report and assumptions regarding the exposure time of residents within their gardens.

An indicative FAR risk assessment has been undertaken based on the following;

1. 1 vehicle impact every 20 years
2. Residents within the garden for 3 hours per day at weekends for 4 months of the year.
3. Each event results in a single fatality

The above assumptions give a Fatal Accident Rate of 7.

This can be compared with a FAR of 15 for travel by car or air and a FAR of 1 for travel by bus.

## **1.0 INTRODUCTION**

- 1.1 Wilde Consultants Ltd (WCL) were engaged by GroundSolve Ltd (GSL) to undertake an inspection and assessment of an existing stone masonry parapet along the A616 New Mill Road in Brockholes.
- 1.2 The parapet which is 118m in length is adjacent to the proposed Brockholes development site. Retaining walls are proposed on the eastern perimeter of the site to allow the proposed housing development. It is the intention that the existing parapet will remain in place
- 1.3 WCL scope of work was to undertake an assessment of the existing parapet in accordance with BS8779:2022 to confirm the following;
- The suitability of the existing masonry wall to contain an errant vehicle,
  - The risk associated with projectile masonry following vehicle impact and taking account of the layout of the proposed Brockholes development by undertaking a FAR (fatal accident rate) risk assessment.
- 1.4 To inform the above assessment WCL undertook an inspection of the existing parapet wall on the 29th February 2024.
- WCL Personnel: D Freeman CEng MICE
- 1.5 The weather on the day of inspection was dry and cold with a temperature of ~5°C. There had been rain within 24 hours prior to the inspection.

## **2.0 AVAILABLE INFORMATION**

2.1 No previous inspections were available at the time of writing.

2.2 No previous assessments were available at the time of writing.

2.3 The following drawings relating to Brockholes Development were made available at the time of writing:

Holloway Jennings Consulting Engineers Drawings;

- 5017 – 516 Brockholes Development, Lancaster Lane – Existing Burr Walls, Heights from road and site

Groundsolve Ltd Drawings;

- 5017-702 Rev G Brockholes Development, Lancaster Lane – Proposed Levels Sheet 2
- 5017-704 Rev A Brockholes Development, Lancaster Lane – Cross Sections, 1-3 Proposed
- 5017-705 Rev A Brockholes Development, Lancaster Lane – Cross Sections, 4-7 Proposed
- 5017-706 Rev A Brockholes Development, Lancaster Lane – Cross Sections, 8-10 Proposed

2.4 Paragon Highways Accident Data Summary Report dated March 2024.

### 3.0 DESCRIPTION OF STRUCTURE

- 3.1 The parapet wall is located on the west side New Mill Road, Brockholes at post code HD9 7EG.
- 3.2 The parapet is 118m in length is adjacent to the proposed Brockholes development site. Retaining walls are proposed on the eastern perimeter of the site to allow the proposed housing development. It is the intention that the existing parapet will remain in place
- 3.3 The parapet wall is of mortared masonry construction with a stone masonry capping. The pointing is recessed to give the appearance of a drystone wall. The width of the wall considered in the assessment tapers from 420mm at back of footway level to 300mm at top of capping. The average height of the parapet above back of footway level is 1100mm.
- 3.4 The parapet dimensions were measures as follows, chainage 0 is taken at the boundary fence to the substation at the north of the site. The width of the parapet at back of footway level could only be taken at 2 No. gate opening locations, with measurements taken each side of the gate at both locations.

Chainage	Parapet Height above footway	Width of coping	Width of parapet at back of footway level	Av width
0	1160	300		
10	1120	300		
20	1140	300		
30	1150	300		
40	1190	300	560, 420	Min 360
50	1170	300		
60	1170	330	480, 430	Min 380
70	1080	300		
80	1100	300		
90	1100	300		
100	1090	300		
110	1130	300		
118	1130	300		
Average	1133			370

- 3.5 For the purposes of the assessment the height of the parapet above footway level will be taken as 1100mm and the average width of the parapet at mid-height will conservatively be taken as 360mm.

#### **4.0 INSPECTION FINDINGS**

- 4.1 Generally, the structure was found to be in good condition with a single area of localised collapse at chainage 82m. (Photos 03,04).
- 4.2 Ivy growth was noted to the wall at the following chainages (Photo 05, typical);
- Ch 27-36m
  - Ch 51-57m
  - Ch 99-107m
- 4.3 Existing gate openings through the parapet were noted at the following chainages;
- Ch 38-41m (Photo 02)
  - Ch 60-62m
- 4.4 The following street furniture was noted on the footway adjacent to the parapet;
- Ch 31m sign post
  - Ch 55m lamp column
  - Ch 91m speed camera
- 4.5 For the purposes of the assessment, it has been assumed that the localised collapse noted at Ch 82m will be made good. No other defects which would be detrimental to the ability of the parapet to contain an errant vehicle were noted.

## 5.0 ASSESSMENT

- 5.1 An assessment in accordance with BS8779:2022 was undertaken to confirm the suitability of the existing parapet wall to contain an errant vehicle.
- 5.2 The parapet was assessed in accordance with BS8770 Fig 1, considering an unreinforced masonry form of construction.
- 5.3 For the purposes of the assessment the dimensions of the parapet were taken as follows;
- Height above back of footway level – 1100mm
  - Average width of the parapet at mid-height – 360mm

Conservatively a low unit-mortar bond strength has been considered.

- 5.4 The traffic speed is signposted as 30mph with a speed camera present along the length of parapet under consideration. In accordance with clause 7.2 BS8770 the traffic speed will be taken as 30mph.

The road alignment is predominantly straight with no features that would affect the vehicle divergence/impact speed.

The minimum impact speed considered in the assessment charts is 80kph (50mph). This is considered to be conservative without further consideration of vehicle divergence.

- 5.5 The assessment concludes that the parapet provides suitable containment for the traffic speed of 30mph.
- 5.6 Following a vehicle impact event individual pieces or large parapet panels of masonry often become ejected or dislodged. The consequence of debris ejection can be serious when properties within range are occupied.

The assessment shows a debris exit velocity of 6m/s and an extent of debris spread of 9.5m to 12m based on the proposed housing development drawings provided.

In all instances this extent of debris would interface with the proposed properties.

- 5.7 The risk associate with debris ejection is determined by undertaking a FAR (Fatal Accident Rate) Risk Assessment. The FAR value can be compared with published FAR values for common activities.
- 5.8 In order to undertake a FAR Risk Assessment information regarding the likely frequency of an errant vehicle incident is required. The Paragon Highways Accident Data Summary Report indicates 6 accidents in the vicinity of the site in the last 24 years up to December 2022. Of the 6 reported accidents only 1 appears to involve a vehicle impacting the parapet wall. Therefore, we have assumed 1 incident every 20 years which would result in debris ejection.

- 5.9 In addition, it is necessary to estimate the exposure time of a resident that may be affected by the debris ejection. It has been assumed that this exposure would be related to a resident being in their garden at the time of the incident. In calculating the exposure time, we have assumed that residents spend 3 hours per day in their garden at the weekend for a period of 4 months per year.
- 5.10 It should be noted that the result of the FAR risk assessment is very much dependent on the above assumptions. Should the local authority consider that different return periods or exposure times should be considered then the risk assessment can be revised accordingly.
- 5.11 Based on the above the FAR is 7. This can be compared with a FAR of 15 for travel by car or air and a FAR of 1 for travel by bus, see below;

**Table 5** — Risk evaluation - Fatal Accident Rate (FAR) for common activities

Activity	FAR
Travel by bus	1
Travel by car or by air	15
Walking beside a road	20
Travel by motorcycle	300
Travel by helicopter	500

*NOTE* Reproduced from Department for Transport's Guidance on the design assessment and strengthening of masonry parapets on highway structures', Her Majesty's Stationery Office 2012 [2].

*NOTE 2* The Hambly paper [2] is written in general terms and is not specifically aimed at parapet impacts.

- 5.12 It should be noted that this assessment assumes that an incident leads to a fatality. It also assumes that a person in the garden at the time of the incident is directly in the path of the ejected masonry.

## **6.0 CONCLUSION AND RECOMMENDATIONS**

- 6.1 Generally, the structure was found to be in good condition with a single area of localised collapse at chainage 82m which is considered to be due to localised impact. This area of collapse should be made good to ensure that the parapet is capable of providing adequate containment.
- 6.2 The assessment concludes that the parapet provides suitable containment for the traffic speed of 30mph.
- 6.3 The assessment shows a debris exit velocity of 6m/s and an extent of debris spread of 9.5m to 12m based on the proposed housing development drawings provided.

In all instances this extent of debris would interface with the proposed properties.

- 6.4 An indicative FAR Risk Assessment has been undertaken based on the assumptions detailed in Section 5 above.

The FAR is 7 which can be compared with a FAR of 15 for travel by car or air and a FAR of 1 for travel by bus.

The client should review and consider the appropriateness of the assumptions made in undertaking this risk assessment.

Additional FAR Risk Assessments can be undertaken as necessary.

## **APPENDIX A – PHOTOGRAPHS**

### List of Photographs

<b>Ref.</b>	<b>Location</b>	<b>Description</b>
01	Parapet	View looking north along the parapet
02	Parapet	Typical section through parapet wall at ch 38m
03	Parapet	Ch 82m: Localised collapse.
04	Parapet	Ch 82m: Non-traffic face of parapet at location of localised collapse
05	Parapet	Ivy growth to top of parapet, typical at ch 27-36m, ch 51-57m, ch 99-103m.



Parapet

View looking north along the parapet

01



Parapet

Typical section through parapet wall at ch 38m

02



Parapet

Ch 82m: Localised collapse

03



Parapet

Ch 82m: Non-traffic face of parapet at location of localised collapse

04



Parapet                      Ivy growth to top of parapet, typical at ch 27-36m, ch 51-57m, ch 99-103m                      05

**APPENDIX B – ASSESSMENT CALCULATIONS**

# DESIGN CALCULATION

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www.wildecivil.co.uk  
wp@wilde.uk.com

# Wilde

Consulting Engineers



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New Mills Road Parapet Assessment

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**Calculation Number:**  
891010-WCL-XX-XX-CA-C-0001

**Project Number:**  
891-010

**Sheet 1 of 21**

**Date:**  
March 2024

**Client:**  
Groundsolve Ltd

**Client Project Number:**  
-

**Calculation Title:**  
Parapet Wall Assessment

**Project Engineer:**  
D Freeman

**Signature:**  
  
**Date:** March 24

**Calculation Originator:**  
D Freeman

**Signature:**  
  
**Date:** March 24

**Verified By:**  
J Kok Shun

**Signature:**  
  
**Date:** March 24

**Approved By:**  
D Freeman

**Signature:**  
  
**Date:** March 24

## RECORD OF REVISION AND ISSUE

REV	DATE	DESCRIPTION	SHEET REF	BY	VERIFIED BY	APPROVED BY	DATE
0	March 2024	FIRST ISSUE	ALL	DRF	JKS	DRF	March 24
1	March 2024	UPDATED TO INCORPORATE ACCIDENT DATA	ALL	DRF	JKS	DRF	March 24

<i>Design By</i> DRF	<i>Date</i> March 24	<i>Check By</i> JKS	<i>Date</i> March 24	<i>Set</i> CA-C-001	<i>Page No</i> 2	<i>Rev</i> 0
<i>Reference</i>	<i>Calculations</i> Parapet Assessment				<i>Output</i>	

### **New Mill Road Parapet Assessment**

The following calculations provide an assessment of the unreinforced masonry parapet along the length of New Mill Road adjacent to the proposed Brockholes Development. The assessment is undertaken in accordance with BS8779:2022 Assessment, maintenance and repair of masonry highway parapets for bridges and other structures – Code of Practice.

This assessment considers the suitability of the existing masonry wall to contain an errant vehicle, ie determines the parapet containment, and also undertakes a FAR (fatal accident rate) risk assessment to consider the risk associated with projectile masonry following vehicle impact and taking account of the layout of the proposed Brockholes development.

### **Relevant Drawings**

The proposed Brockholes development is indicated on the following drawings which have been provided to Wilde Consultants Ltd by Groundsolve Ltd.

Holloway Jennings Consulting Engineers Drawings;

5017 – 516 Brockholes Development, Lancaster Lane – Existing Burr Walls, Heights from road and site

Groundsolve Ltd Drawings;

5017-702 Rev G Brockholes Development, Lancaster Lane – Proposed Levels Sheet 2

5017-704 Rev A Brockholes Development, Lancaster Lane – Cross Sections, 1-3 Proposed

5017-705 Rev A Brockholes Development, Lancaster Lane – Cross Sections, 4-7 Proposed

5017-706 Rev A Brockholes Development, Lancaster Lane – Cross Sections, 8-10 Proposed

### **Site Inspection**

WCL undertook a site inspection on the 29/02/24. The wall was found to be generally in good condition with only a single defect which would be considered to be detrimental to the ability of the parapet to provide containment. The results of the inspection are presented in report ref 891010-WCL-XX-XX-RP-C-0001.

For the purposes of this assessment it is assumed the above defect will be made good prior to the completion of the proposed Brockholes development.

The parapet dimensions were measured as follows, chainage 0 is taken at the boundary fence to the substation at the north of the site. The width of the parapet at footway level could only be taken at 2 No. gate opening locations, the width was measured at each side of the gate opening.

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<i>Reference</i>	<i>Calculations</i> Parapet Assessment				<i>Output</i>	

Chainage	Parapet Height above footway	Width of coping	Width of parapet at back of footway level	Av width
0	1160	300		
10	1120	300		
20	1140	300		
30	1150	300		
40	1190	300	560, 420	Min 360
50	1170	300		
60	1170	330	480, 430	Min 380
70	1080	300		
80	1100	300		
90	1100	300		
100	1090	300		
110	1130	300		
118	1130	300		
Average	1133			370

For the purposes of the assessment the height of the parapet above footway level will be taken as **1100mm** and the average width of the parapet will conservatively be taken as **360mm**.

### Assessment Methodology

The parapet will be assessed in accordance with BS8770 Fig 1, see below.

The parapet is considered to be of unreinforced mortared masonry construction.

The dimensions of the parapet will be taken as noted above.

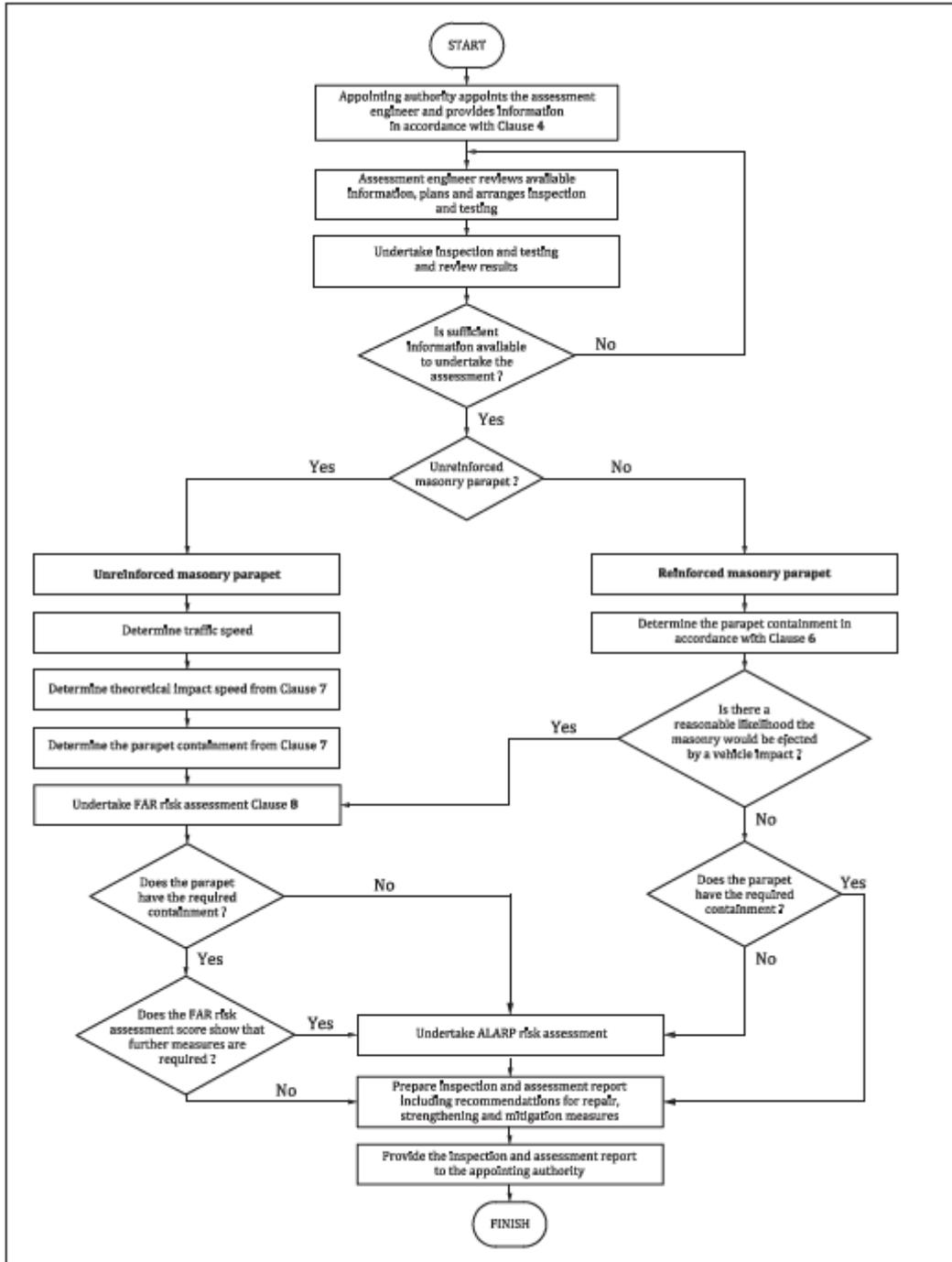
The traffic speed is signposted as 30mph with a speed camera present along the length of parapet under consideration. In accordance with clause 7.2 BS8770 the traffic speed will be taken as 30mph.

The road alignment is predominantly straight with no features that would affect the vehicle divergence/impact speed.

The minimum impact speed considered in the assessment charts is 80kph (50mph). This is considered to be conservative without further consideration of vehicle divergence.

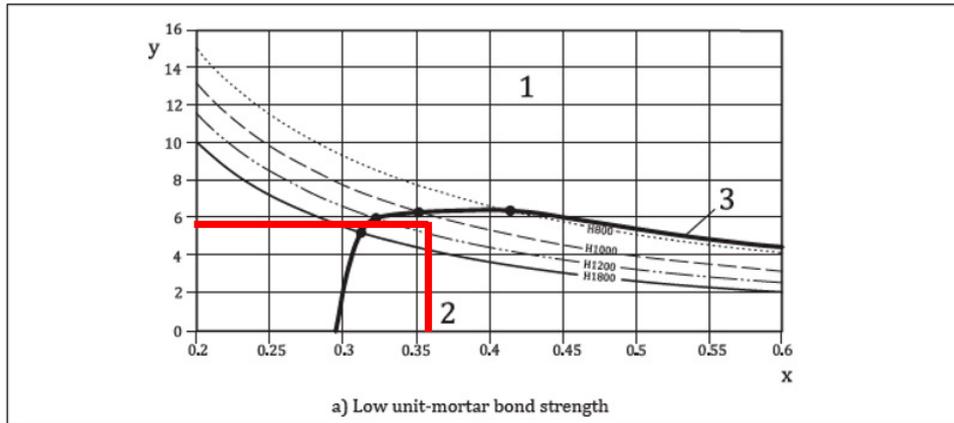
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Figure 1 — Flowchart showing a suggested process for masonry parapet assessment



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**Figure 3 — Parapet performance chart: for 80 km/h for mortared parapets of height, H (mm) (density: 2 200 kg/m<sup>3</sup>) that contain and direct cars at an impact angle of 20° or less**



### Assessment of vehicle containment

Fig 3 above shows that the existing parapet, 1100mm high with 360mm av width at mid-height, provides adequate containment for and impact speed of 80kph.

The debris exit velocity is taken as 6m/s.

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**FAR Risk Assessment**

Figure 10 — Extent of debris spread: definition

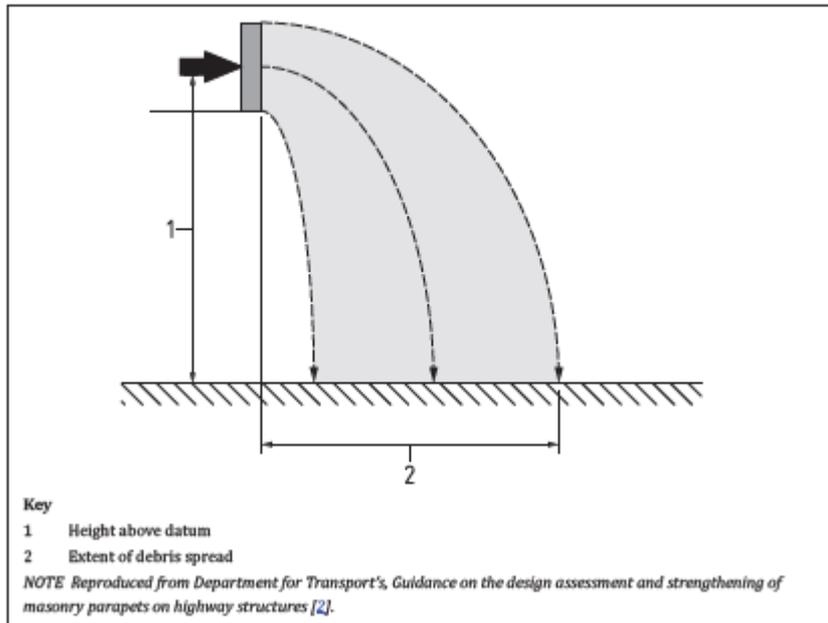


Table 7 — Extent of debris spread: values of *d*

Mean debris exit velocity (m/s)	Height above datum <i>h</i> (to mid-height of parapet)				
	2 m	4 m	6 m	8 m	10 m
(from Figure 3 or Figure 4)					
1	1	2	2	3	3
2	3	4	4	5	6
3	4	5	7	8	9
4	5	7	9	10	11
5	6	9	11	13	14
6	8	11	13	15	17
7	9	13	15	18	20
8	10	14	18	20	23
9	11	16	20	23	26
10	13	18	22	26	29
11	14	20	24	28	31
12	15	22	27	31	34

*NOTE 1 Reproduced from Department for Transport's Guidance on the design assessment and strengthening of masonry parapets on highway structures; Her Majesty's Stationery Office 2012 [2].*

*NOTE 2 Values calculated assuming (i) debris is ejected horizontally and in free flight; (ii) the extent of debris spread *d* is taken as twice the mean value, calculated from  $d = v\sqrt{2h / 9.81}$*

*NOTE 3 The resulting extent of debris spread can be rounded up to a whole number.*

Plot 4 (ref Groundsolve Drg No. 702)

Height above datum is approx. 3.0m giving an extent of debris spread of approx. 9.5m.

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Plots 5 to 9 (ref Groundsolve Drg No. 702)

Height above datum is approx. 5m giving an extent of debris of 12m.

In all instances this extent of debris would interface with the proposed properties, including buildings.

### 8.6 Calculated FAR value

The absolute risk should be determined by computing the fatal accident rate (FAR) value:

$$FAR = \frac{100000000}{T_r / N_{total}} \quad (6)$$

where:

$T_r$  is the return period (from 8.2.3, converted into hours)

$N_{total}$  is total number of vehicles affected by the errant vehicle impact event

*NOTE 1 In the equation for  $N_{total}$  in 8.5, it is implicitly assumed that there will be one fatality per vehicle, though a greater (or lesser) number of fatalities per vehicle can be assumed depending on site conditions. Further information about car occupancy is obtainable from the DfT document: Car occupancy by trip purpose, NTS0906 [4].*

In calculating the FAR value it is assumed that the projectile masonry could cause the death of a resident who is in the garden at the time a vehicle impacts the parapet.

In order to determine the return period a number of assumptions need to be made, these are as follows;

Frequency of errant vehicle incident.

Accident data has been provided by Paragon Highways, Accident Data Summary Report dated March 2024. The data shows 6 recorded accidents within the vicinity of the proposed development in the 24 years up to December 2022. Of the 6 accidents only 1 appears to have involved a vehicle impacting the parapet wall.

Therefore assume 1 incident every 20 years

$$\text{Frequency/hour} = 1/(20*365*24) = 5.71*10^{-6}$$

Exposure time of resident in their garden.

Say 3 hrs per day at weekends for 4 months of the year. This assumes that a single person is struck by projectile masonry, ie  $N_{total} = 1$ .

$$\text{Exposure time} = (3*2*4)/(24*7*12) = 0.012$$

$$\text{Probability of simultaneous exposure} = 5.71*10^{-6} * 0.012 = 7*10^{-8}$$

$$FAR = 100,000,000/(1/7*10^{-8}) = 7,$$

this is can be compared with the following;

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<i>Reference</i>	<i>Calculations</i> Parapet Assessment				<i>Output</i>	

Travel by bus – FAR = 1

Travel by car or by air – FAR = 15, see below

**Table 5 — Risk evaluation - Fatal Accident Rate (FAR) for common activities**

Activity	FAR
Travel by bus	1
Travel by car or by air	15
Walking beside a road	20
Travel by motorcycle	300
Travel by helicopter	500

*NOTE* Reproduced from Department for Transport's Guidance on the design assessment and strengthening of masonry parapets on highway structures, Her Majesty's Stationery Office 2012 [2].

*NOTE 2* The Hambly paper [2] is written in general terms and is not specifically aimed at parapet impacts.

**APPENDIX C – PARAGON HIGHWAYS, ACCIDENT DATA SUMMARY REPORT**



# Lancaster Lane, Brockholes

## Accident Data Summary Report

March 2024

Project number 926K

Paragon Highways  
Office 20/21 The Rear Walled Garden, Nostell  
Estate

Wakefield WF4 1AB

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# Quality Management

	First Issue	Revision 1	Revision 2	Revision 3
Remarks				
Date	March 2024			
Prepared by	A Howarth			
Checked by				

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## Appendices

Appendix A	CrashMap Injury Accident Data
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## Figure

Figure 1.1	CrashMap Survey Area
Figure 1.2	Injury Accident Data Summary

## 1.0 Road Traffic Accidents

- 1.1 The personal injury accident data for the last 24 years up to December 2022 within the vicinity of the site has been obtained from the CrashMap website. The data used is provided by the Department for Transport which is based upon records provided to them by local police forces. The accident data can be found at Appendix A.
- 1.2 The study area includes areas of Lancaster Lane, the A616 New Mill Road, and Rockmill Road within vicinity of the site and can be seen on the image at Figure 1.1.

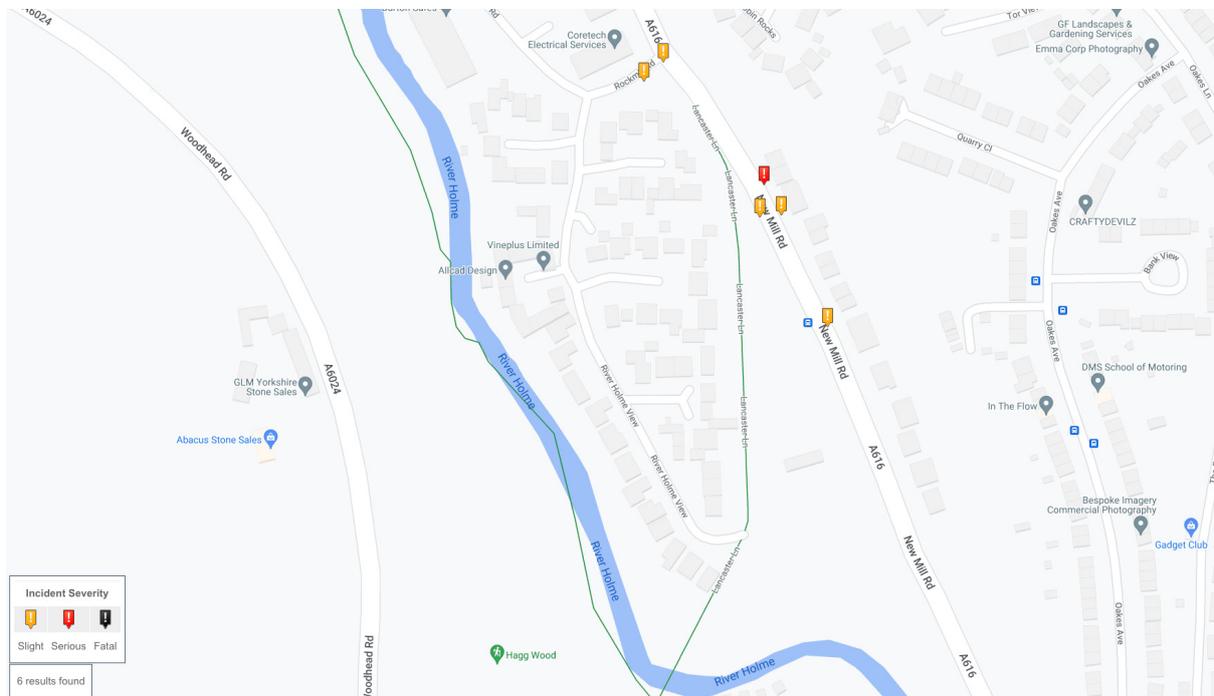


Figure 1.1 CrashMap Survey Area

- 1.3 According to the CrashMap data there have been 6 injury accidents reported within the past 24 years within the search area. The earliest accident recorded was in 2004, with the most recent being 2022. A summary of the accidents can be found within the table at Figure 1.2. The detailed reports of the collisions can be found at Appendix A.

Reference	Severity	Date / Time	Description
130017331	Slight	Jan 12 11 / 17:15	Vehicle 1 (van or goods vehicle 3.5t or under) is in the act of turning right at the junction of Rockmill Road / A616 New Mill Road when the driver of Vehicle 1 suffered a slight injury. The cause of the accident is unknown as no impact occurred.
130028177	Slight	Jan 19 11 / 09:08	Vehicle 1 (car excluding private hire) is in the act of turning right at the junction of Rockmill Road / A616 New Mill Road, whilst Vehicle 2 (pedal cycle) is proceeding normally along the carriageway. The front of Vehicle 1 impacts the front of Vehicle 2, and the rider of Vehicle 2 suffers a slight injury.
135AV0540	Serious	Oct 31 18 / 11:00	Vehicle 1 (motorcycle 50 - 125cc) is proceeding normally along the A616 New Mill Road on the carriageway, not on a bend, when the vehicle hits the kerb on the carriageway, causing the rider to then hit a wall or fence off carriageway. The rider of Vehicle 1 suffers a serious injury.
130513804	Slight	May 25 04 / 11:22	Vehicle 1 and Vehicle 2 (both cars including private hire) is proceeding normally along the carriageway, not on a bend, on the A616 New Mill Road, when the front of Vehicle 1 impacts the front of Vehicle 2. The driver and all three passengers of Vehicle 1, as well as the driver and all three passengers of Vehicle 2 suffer slight injuries.
131141157	Slight	Feb 07 22 / 20:00	Vehicle 1 (car excluding private hire) is making an unknown manoeuvre on the A616 New Mill Road, whilst Vehicle 2 (car excluding private hire) is parked in the carriageway. The front of Vehicle 1 impacts the offside of Vehicle 2 and the passenger of Vehicle 2 suffers a slight injury.
134741528	Slight	Jul 04 17 / 18:35	Vehicle 1 (motorcycle 125 – 500cc) is proceeding normally along the carriageway on the A616 New Mill Road, not on a bend, whilst Vehicle 2 (car excluding private hire) is waiting to proceed normally but if held up. The front of Vehicle 1 impacts the rear of Vehicle 2 and the rider of Vehicle 1 suffers a slight injury.

Figure 1.2 Injury Accident Data Summary

1.4 In conclusion, the analysis of the personal injury accident data shown at Figure 1.2 within the vicinity of Lancaster Lane, the A616 New Mill Road, and Rockmill Road over the last 24 years shows a relatively low number of accidents, with only six reported cases. This data, sourced from the Department for Transport via local police force records and analysed through the CrashMap website, offers a reliable

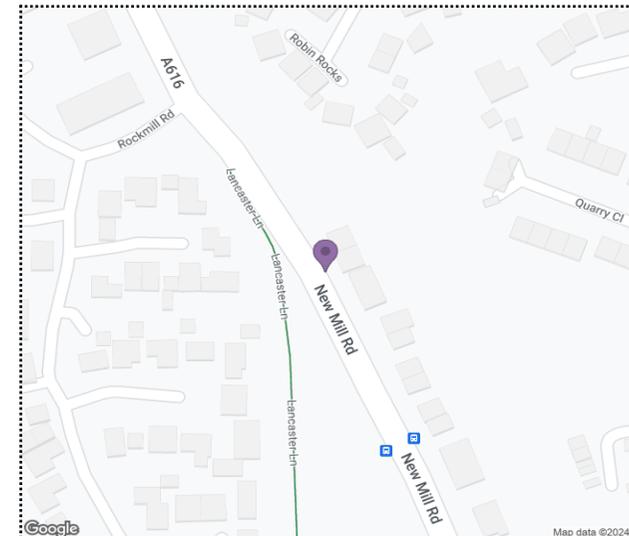
foundation for understanding the safety situation of the area in question. The incidents, recorded between 2004 and 2022, primarily suggest that driver recklessness or inexperience was a contributing factor, rather than any inherent road safety issues. This evidence indicates that the area surrounding the proposed site does not present significant safety risks from a road safety perspective.

# Appendix A

## CrashMap Injury Accident Data

## Validated Data

<b>Crash Date:</b>	Wednesday, October 31, 2018	<b>Time of Crash:</b>	11:00:00	<b>Crash Reference:</b>	2018135AV0540
<b>Highest Injury Severity:</b>	Serious	<b>Road Number:</b>	A616	<b>Casualties:</b>	1
<b>Highway Authority:</b>	Kirklees			<b>Vehicles:</b>	1
<b>Local Authority:</b>	Kirklees			<b>OS Grid Reference:</b>	415262 410724
<b>Weather Description:</b>	Fine without high winds				
<b>Road Surface Description:</b>	Dry				
<b>Speed Limit:</b>	30				
<b>Light Conditions:</b>	Daylight: regardless of presence of streetlights				
<b>Carriageway Hazards:</b>	None				
<b>Junction Detail:</b>	Not at or within 20 metres of junction				
<b>Junction Pedestrian Crossing:</b>	No physical crossing facility within 50 metres				
<b>Road Type:</b>	Single carriageway				
<b>Junction Control:</b>	Not Applicable				



For more information about the data please visit: [www.crashmap.co.uk/home/faq](http://www.crashmap.co.uk/home/faq)

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## Validated Data

**Crash Date:**

Wednesday, October 31, 2018

**Time of Crash:** 11:00:00

**Crash Reference:** 2018135AV0540

## Vehicles Involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Motorcycle over 50cc and up to 125cc	11	Female	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Unknown	Kerb	Wall or fence

## Casualties

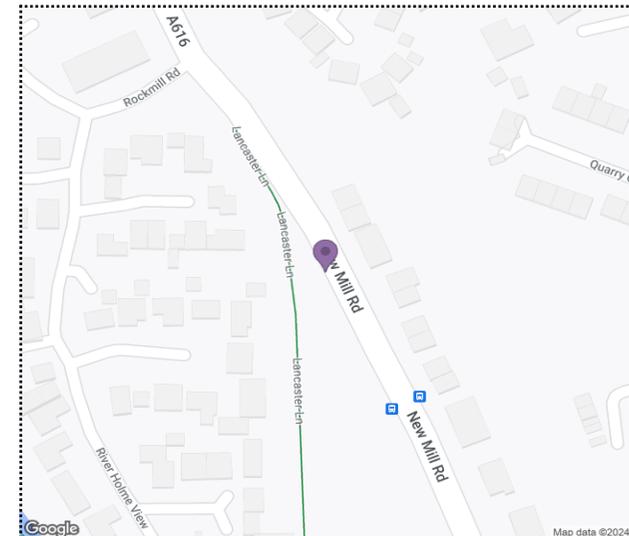
Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Driver or rider	Female	36 - 45	Unknown or other	Unknown or other

For more information about the data please visit: [www.crashmap.co.uk/home/faq](http://www.crashmap.co.uk/home/faq)

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### Validated Data

<b>Crash Date:</b>	Tuesday, May 25, 2004	<b>Time of Crash:</b>	11:22:00	<b>Crash Reference:</b>	2004130513804
<b>Highest Injury Severity:</b>	Slight	<b>Road Number:</b>	A616	<b>Casualties:</b>	2
<b>Highway Authority:</b>	Kirklees			<b>Vehicles:</b>	2
<b>Local Authority:</b>	Kirklees			<b>OS Grid Reference:</b>	415260 410710
<b>Weather Description:</b>	Fine without high winds				
<b>Road Surface Description:</b>	Dry				
<b>Speed Limit:</b>	30				
<b>Light Conditions:</b>	Daylight: regardless of presence of streetlights				
<b>Carriageway Hazards:</b>	None				
<b>Junction Detail:</b>	Not at or within 20 metres of junction				
<b>Junction Pedestrian Crossing:</b>	No physical crossing facility within 50 metres				
<b>Road Type:</b>	Single carriageway				
<b>Junction Control:</b>	Not Applicable				
<b>Vehicles Involved</b>					



For more information about the data please visit: [www.crashmap.co.uk/home/faq](http://www.crashmap.co.uk/home/faq)

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**Validated Data****Crash Date:**

Tuesday, May 25, 2004

**Time of Crash:** 11:22:00**Crash Reference:** 2004130513804

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (including private hire cars)	6	Female	Over 75	Vehicle proceeding normally along the carriageway, not on a bend	Front	Unknown	None	None
1	Car (including private hire cars)	6	Female	Over 75	Vehicle proceeding normally along the carriageway, not on a bend	Front	Unknown	None	None
1	Car (including private hire cars)	6	Female	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Unknown	Other	None	None
2	Car (including private hire cars)	1	Male	11 - 15	Vehicle proceeding normally along the carriageway, not on a bend	Unknown	Other	None	None
1	Car (including private hire cars)	6	Female	Over 75	Vehicle proceeding normally along the carriageway, not on a bend	Front	Unknown	None	None
2	Car (including private hire cars)	1	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Front	Unknown	None	None
2	Car (including private hire cars)	1	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Front	Unknown	None	None
2	Car (including private hire cars)	1	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Front	Unknown	None	None

**Casualties**For more information about the data please visit: [www.crashmap.co.uk/home/faq](http://www.crashmap.co.uk/home/faq)To subscribe to unlimited reports using CrashMap Pro visit: [www.crashmap.co.uk/home/premium\\_services](http://www.crashmap.co.uk/home/premium_services)

**Validated Data****Crash Date:**

Tuesday, May 25, 2004

**Time of Crash:** 11:22:00**Crash Reference:** 2004130513804

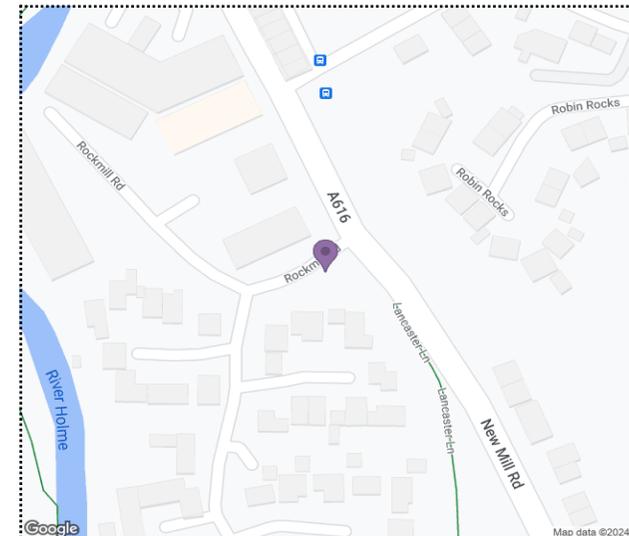
Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Female	26 - 35	Unknown or other	Unknown or other
1	1	Slight	Driver or rider	Female	Over 75	Unknown or other	Unknown or other
1	1	Slight	Driver or rider	Female	Over 75	Unknown or other	Unknown or other
1	1	Slight	Driver or rider	Female	Over 75	Unknown or other	Unknown or other
2	2	Slight	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other
2	2	Slight	Driver or rider	Male	11 - 15	Unknown or other	Unknown or other
2	2	Slight	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other
2	2	Slight	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other

For more information about the data please visit: [www.crashmap.co.uk/home/faq](http://www.crashmap.co.uk/home/faq)

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## Validated Data

<b>Crash Date:</b>	Wednesday, January 12, 2011	<b>Time of Crash:</b>	17:15:00	<b>Crash Reference:</b>	2011130017331
<b>Highest Injury Severity:</b>	Slight	<b>Road Number:</b>	U0	<b>Casualties:</b>	1
<b>Highway Authority:</b>	Kirklees	<b>Vehicles:</b>	1	<b>OS Grid Reference:</b>	415200 410780
<b>Local Authority:</b>	Kirklees				
<b>Weather Description:</b>	Fine without high winds				
<b>Road Surface Description:</b>	Wet or Damp				
<b>Speed Limit:</b>	30				
<b>Light Conditions:</b>	Darkness: street lights present and lit				
<b>Carriageway Hazards:</b>	None				
<b>Junction Detail:</b>	T or staggered junction				
<b>Junction Pedestrian Crossing:</b>	No physical crossing facility within 50 metres				
<b>Road Type:</b>	Single carriageway				
<b>Junction Control:</b>	Give way or uncontrolled				



For more information about the data please visit: [www.crashmap.co.uk/home/faq](http://www.crashmap.co.uk/home/faq)

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**Validated Data****Crash Date:**

Wednesday, January 12, 2011

**Time of Crash:** 17:15:00**Crash Reference:** 2011130017331**Vehicles Involved**

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Van or goods vehicle 3.5 tonnes mgw and under	2	Male	36 - 45	Vehicle is in the act of turning right	Did not impact	Journey as part of work	None	None

**Casualties**

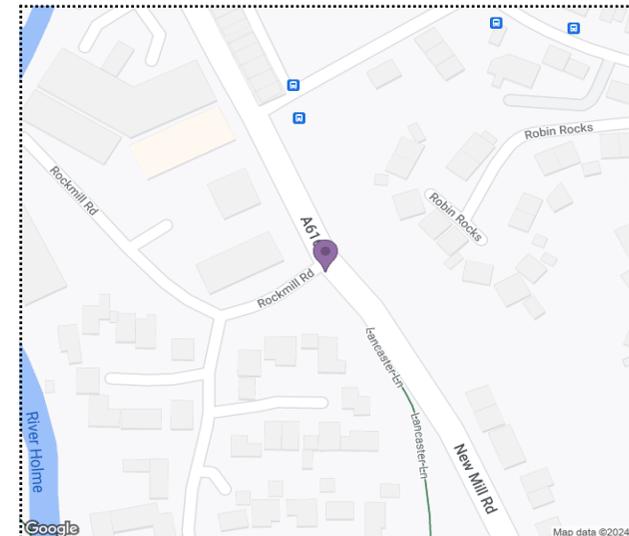
Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	36 - 45	Unknown or other	Unknown or other

For more information about the data please visit: [www.crashmap.co.uk/home/faq](http://www.crashmap.co.uk/home/faq)

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## Validated Data

<b>Crash Date:</b>	Wednesday, January 19, 2011	<b>Time of Crash:</b>	09:08:00	<b>Crash Reference:</b>	2011130028177
<b>Highest Injury Severity:</b>	Slight	<b>Road Number:</b>	A616	<b>Casualties:</b>	1
<b>Highway Authority:</b>	Kirklees	<b>Vehicles:</b>	2	<b>OS Grid Reference:</b>	415210 410790
<b>Local Authority:</b>	Kirklees				
<b>Weather Description:</b>	Fine without high winds				
<b>Road Surface Description:</b>	Dry				
<b>Speed Limit:</b>	30				
<b>Light Conditions:</b>	Daylight: regardless of presence of streetlights				
<b>Carriageway Hazards:</b>	None				
<b>Junction Detail:</b>	T or staggered junction				
<b>Junction Pedestrian Crossing:</b>	No physical crossing facility within 50 metres				
<b>Road Type:</b>	Single carriageway				
<b>Junction Control:</b>	Give way or uncontrolled				



For more information about the data please visit: [www.crashmap.co.uk/home/faq](http://www.crashmap.co.uk/home/faq)

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## Validated Data

**Crash Date:**

Wednesday, January 19, 2011

**Time of Crash:** 09:08:00

**Crash Reference:** 2011130028177

## Vehicles Involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	8	Male	36 - 45	Vehicle is in the act of turning right	Front	Unknown	None	None
2	Pedal cycle	-1	Male	56 - 65	Vehicle proceeding normally along the carriageway, not on a bend	Front	Unknown	None	None

## Casualties

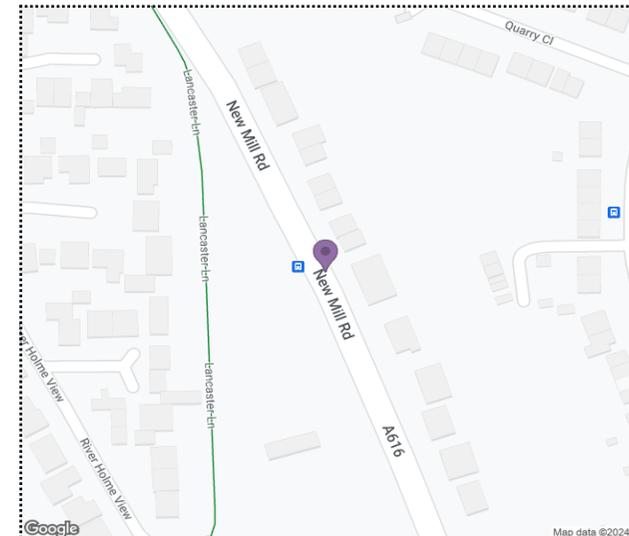
Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Male	56 - 65	Unknown or other	Unknown or other

For more information about the data please visit: [www.crashmap.co.uk/home/faq](http://www.crashmap.co.uk/home/faq)

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### Validated Data

<b>Crash Date:</b>	Tuesday, July 4, 2017	<b>Time of Crash:</b>	18:35:00	<b>Crash Reference:</b>	2017134741528
<b>Highest Injury Severity:</b>	Slight	<b>Road Number:</b>	A616	<b>Casualties:</b>	1
<b>Highway Authority:</b>	Kirklees			<b>Vehicles:</b>	2
<b>Local Authority:</b>	Kirklees			<b>OS Grid Reference:</b>	415295 410651
<b>Weather Description:</b>	Fine without high winds				
<b>Road Surface Description:</b>	Dry				
<b>Speed Limit:</b>	30				
<b>Light Conditions:</b>	Darkness: street lighting unknown				
<b>Carriageway Hazards:</b>	None				
<b>Junction Detail:</b>	Not at or within 20 metres of junction				
<b>Junction Pedestrian Crossing:</b>	No physical crossing facility within 50 metres				
<b>Road Type:</b>	Single carriageway				
<b>Junction Control:</b>	Not Applicable				



For more information about the data please visit: [www.crashmap.co.uk/home/faq](http://www.crashmap.co.uk/home/faq)

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**Validated Data****Crash Date:**

Tuesday, July 4, 2017

**Time of Crash:** 18:35:00**Crash Reference:** 2017134741528**Vehicles Involved**

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Motorcycle over 125cc and up to 500cc	2	Male	16 - 20	Vehicle proceeding normally along the carriageway, not on a bend	Front	Unknown	None	None
2	Car (excluding private hire)	3	Female	46 - 55	Vehicle is waiting to proceed normally but is held up	Back	Unknown	None	None

**Casualties**

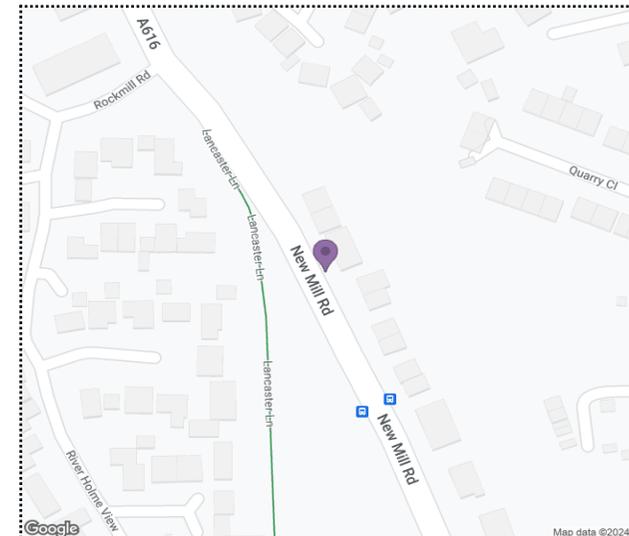
Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	16 - 20	Unknown or other	Unknown or other

For more information about the data please visit: [www.crashmap.co.uk/home/faq](http://www.crashmap.co.uk/home/faq)

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## Validated Data

<b>Crash Date:</b>	Monday, February 7, 2022	<b>Time of Crash:</b>	20:00:00	<b>Crash Reference:</b>	2022131141157
<b>Highest Injury Severity:</b>	Slight	<b>Road Number:</b>	A616	<b>Casualties:</b>	1
<b>Highway Authority:</b>	Kirklees			<b>Vehicles:</b>	2
<b>Local Authority:</b>	Kirklees			<b>OS Grid Reference:</b>	415271 410710
<b>Weather Description:</b>	Fine without high winds				
<b>Road Surface Description:</b>	Dry				
<b>Speed Limit:</b>	30				
<b>Light Conditions:</b>	Darkness: street lights present and lit				
<b>Carriageway Hazards:</b>	None				
<b>Junction Detail:</b>	Not at or within 20 metres of junction				
<b>Junction Pedestrian Crossing:</b>	No physical crossing facility within 50 metres				
<b>Road Type:</b>	Single carriageway				
<b>Junction Control:</b>	Not Applicable				



For more information about the data please visit: [www.crashmap.co.uk/home/faq](http://www.crashmap.co.uk/home/faq)

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**Validated Data****Crash Date:**

Monday, February 7, 2022

**Time of Crash:** 20:00:00**Crash Reference:** 2022131141157**Vehicles Involved**

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	9	Unknown	Unknown	Unknown	Front	Unknown	Unknown	Unknown
2	Car (excluding private hire)	-1	Unknown	Unknown	Vehicle is parked in the carriageway	Offside	Unknown	None	None

**Casualties**

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Vehicle or pillion passenger	Female	16 - 20	Unknown or other	Unknown or other

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