SUPPLEMENTARY AGENDA

CABINET MEMBER FOR TRAFFIC & TRANSPORTATION

THURSDAY, 4 NOVEMBER 2021 AT 4PM

COUNCIL CHAMBER, SECOND FLOOR, THE GUILDHALL

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Membership

Councillor Lynne Stagg (Cabinet Member) Councillor Simon Bosher Councillor Graham Heaney

(NB This supplementary agenda should be retained for future reference with the main agenda and minutes of this meeting).

SUPPLEMENTARY AGENDA

3 Old Portsmouth Area Traffic Study (Pages 3 - 122)

The study report and appendix referred to in the officer's report is attached.



Agenda Item 3



Old Portsmouth Area traffic study

Undertaken by Portsmouth City Council in consultation with the Old Portsmouth Traffic & Road Safety Working Group

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A)	Recommended schemes & further work	

Α

Provided separately of this document:

- B) Speed Survey data
- C) Casualty data
- D) Feasibility designs
- E) Additional Speed Survey High Street
- F) Additional Traffic Survey High Street Superseded Analysis



Executive Summary

Following commission of a holistic study of traffic and travel issues in Old Portsmouth by the Cabinet Member for Traffic & Transportation, residents and stakeholders were invited to highlight those issues that most affected their area. After a detailed examination of the issues raised, it is recommended that:

- 1. Once agreed by stakeholders, this report is acknowledged formally by the member for Traffic & Transportation at a Cabinet meeting
- 2. Progress with feasibility work to develop schemes as recommended in this report (Full list is included at Appendix A) in conjunction with members of the working group
- 3. Progress proposals for a "School Street" for St Judes' school to address concerns around traffic congestion and Air Quality
- 4. This report provides a basis to support a bid to fund delivery of the identified interventions as detailed and in line with the schedule set out at Appendix A of the study report
- 5. Undertake a review of existing policy related to speed measurement and analysis, and pedestrian crossing assessment to reflect changes in National Policy
- 6. Review identified accident cluster at Cambridge Roundabout and take action if necessary as soon as practicable
- 7. Pursue funding opportunities to implement safety measures at the Kings' Road Roundabout



1. Introduction

The Old Portsmouth area traffic study is the result of a collaborative working initiative set up to discuss and find solutions to transport-related issues in the Old Portsmouth area identified by residents and businesses.

The aim of this report is to examine the priority issues by collecting evidence and establishing whether the issues raised cause detriment to the operation of the highway, the safety of road users and/or the overall quality of life of residents and visitors in Old Portsmouth.

The report outlines the scope of the study as agreed with stakeholders, it consolidates various pieces of work previously undertaken, examines the further evidence collected as part of the study and discusses the findings. The report also makes several recommendations and includes indicative sketches of possible schemes to address identified issues.

Once agreed with the wider study group, this report and its recommendations shall be submitted to the Cabinet member of Traffic & Transportation at a decision meeting for formal recognition. This recognition will give significant weight and focus to the future funding bids that will be required to deliver the improvement schemes identified within this report.

2. Context

Old Portsmouth is an historic area of Portsmouth with conflicting travel demands. Although occupying a relatively small portion of Portsea Island, the area receives a disproportionate amount of visitors compared with other areas of the city.

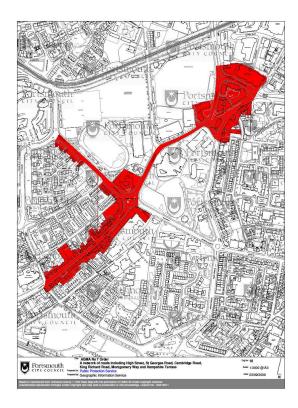
The wider area has a number of strategically important links including a section of the A3, a busy ferry terminal linking the mainland with the Isle of Wight, the headquarters of a world-class sailing team, a large independent co-educational Grammar school, thriving Primary School and a number of heritage attractions.

The key highway routes passing through the area are High Street (A3), Pembroke Road, Broad Street, St Georges Road (B2154) and Museum Road (B2154); the study area is also bounded to the East by the A288 (Terraces). Speed limits on these roads vary from 20mph to 30mph and all form part of the classified road network, in recognition of their strategic importance.

The Old Portsmouth area has parking controls in the form of a Residents' Parking Zone and Pay & Display parking bays.

Of the five remaining Air Quality Management Areas (AQMA) in Portsmouth, AQMA 7 is located within part of the Old Portsmouth area, extending from Hampshire Terrace and St Michael's gyratory, along Cambridge Road and part of St George's Road and the High Street, as shown on the plan below.





The PCC 2018 Annual Status Report shows that there were no exceedances of the National Air Quality Objective (NAQO) for NO₂ at any of the monitored locations within AQMA 7 in 2017.

The PCC 2019 Annual Status Report shows that the National Air Quality Objective (NAQO) for NO₂ was exceeded at one of the monitored locations within AQMA 7 in 2018.

Following significant interest in traffic issues from residents living in Old Portsmouth, a decision was taken by the then incumbent Traffic & Transportation Portfolio holder (Cllr Ken Ellcome) to begin a community-working group formed of PCC officers, elected members and representatives of local residents' groups - the Old Portsmouth Traffic & Road Safety Working Group (OPTRSWG).

The purpose of the group was to hold informal discussion on matters relating to traffic and transportation within the area of Old Portsmouth and to ensure a consistent approach to enquiries/actions arising from the working group sessions.

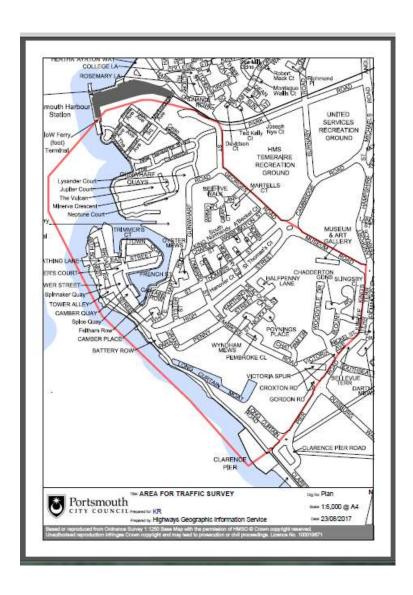
In total, five meetings were held with many recurring themes raised. The commitment was made by the then Portfolio holder (Cllr Fleming) to commission a study of the area to consider all of the issues raised by the group in a holistic way and dependent on the findings, suggest potential remedial schemes/initiatives.



3. Scope of study

An initial workshop was held in October 2017 to form a picture of the key issues within the area with local groups and organisations. The meeting was attended by PCC staff and local Councillors, and included representatives from local residents' groups, schools and businesses, Wightlink and Police PSCO.

The agreed study area is shown below



During this initial meeting, attendees were split into two groups and asked to define potential issues relating to traffic and travel in the Old Portsmouth area. A wide range of issues were identified, providing valuable insight into local issues. The groups were also asked to note down any potential solutions that they felt could be considered. The comments received are shown below.



Concerns raised

Speeding

- Noticeable increase in speed from vehicles turning into Pembroke Road
- Speeding vehicles in Old
 Portsmouth, particularly along the
 High Street (doesn't feel like a
 20mph zone)
- Average vehicle speed times don't reflect peak/variable speeding
- Repeated speeding by same vehicles (indicated by speeding data)
- Speeding vehicles on the approach to the Kings Road/Museum Road roundabout.

Congestion

- Congestion generated from Wightlink site
- HGVs in White Hart Road causing congestion and air pollution
- Portsmouth is a compact city, traffic volumes are too high, need to look at decreasing traffic volume
- Congestion at the terraces causes diverted traffic through Old Portsmouth
- High St is a 'rat run'
- Traffic radar survey boxes show a 35% increase in traffic between 2013 and 2015

Air Quality

- Concerns over air quality in Old Portsmouth- felt to be an un-healthy environment
- Parents collecting/dropping off children to St Jude's School regularly leave their engines idling, increasing local air pollution

Pedestrian/ Walking Environment

 Traffic speeds/volume do not make the environment conducive to walking

Suggestions

Speeding

- Introduce speed cameras/ Vehicle Activated Signs
- Engineer the High Street to support slower vehicle speeds
- Introduce traffic calming measures
- Enforce the 20mph zone throughout the area
- Make Pembroke Road a 20mph zone
- Use engineering measures to narrow two way streets
- Consideration of traffic calming measures, such as rumble strips, on the approach to the Kings Road/Museum Road roundabout.

Congestion

- Move Wightlink traffic to the International Port. Look to have better marshalling directions/signs for people using Wightlink
- Prevent HGV's going to/from
 Wightlink from using Gunwharf Road
- Deter HGV's from using High Street by introducing signage - 'No through road'
- Viviers post code to avoid White Hart sign - no through road
- Consider a congestion charge
- Introduction of residents only parking at select times of day

Air Quality

- Discourage people from driving (where they could walk)
- Carry out further checks on local air quality in the area
- Send letter out to parents of St Jude's School pupils regarding idling vehicles/parking

Pedestrian/Walking Environment

 Improve access on pavement in the local area - dropped kerbs for elderly



- Some of the pavements in the area are too narrow
- Limited dropped kerbs problem for those with limited access (e.g. the elderly)
- Lack of pedestrian crossings in the High St and wider area, such as by the Cathedral, Duke of Buckingham Public House and Broad Street, (on the bend and Feltham Road)
- Parents collecting from Portsmouth Grammar School - vehicles often cause problems by parking on the pavement

Traffic/Parking Issues - St Jude's School

- Parent parking has an impact on St Nicolas Street and Poynings Place
- Many of the parents park in the area near to the school at school pick up and drop off times

Lack of alternative travel options

- There is only 1 bus service available on a Sunday
- Lack of cycle connectivity through the area from the Seafront to Old Portsmouth
- Need to find sustainable travel solution to the traffic problems in Old Portsmouth

Preserving Conservation/Promoting

Tourism

- Old Portsmouth is a historic area, and this needs to be preserved.
- It is important to balance the needs of tourists, businesses and conservation

- and disabled (high residency of elderly people)
- Widen the pavement in High Street
- Install a zebra crossing at Broad Street, near the Hotwalls and in High Street
- Consider a pedestrian zone or restrictive parking zone

Traffic/ Parking Issues - St Jude's School

- Work with parents to reduce parking near St Jude's
- Introduce double red lines at key areas around school location
- Consider a daily closure of the road immediately outside the school
- Introduce a 'tow zone' in the main roads surrounding the school
- Use the museum car park for school pick up/drop off
- ANPR enforcement during school times

Lack of alternative travel options

- Extend Park and Ride to cover the Old Portsmouth area
- Make improvements to public transport, particularly consider increasing bus availability on a Sunday
- Complete the Shipwright's Way

Preserving Conservation/Promoting

Tourism

- Increase of parking charges (however, recognise this could be detrimental to business)
- Need to have a reduction in traffic volumes and speed



- More events will be held at Hotwalls/Square Tower in the future - currently there is not adequate public transport options to support this
- Develop a viable tourist public transport model or improvements to public transport for tourists
- Introduce more prominent tourist signs for walking routes from Gunwharf Quays and The Hard (and increase marketing of this)

Enforcement

 Lack of adequate resources make it difficult to enforce traffic issues in the area.

Enforcement

 Lack of enforcement resource increases importance of engineering measures to ensure speed limits are self-enforcing



4. Project Information

4a. Previous work

Over a number of years, a range of traffic related issues related to Old Portsmouth have been raised, including: vehicles speeding, lack of safe road crossing opportunities, parking difficulties, school pick up/drop off challenges, congestion arising from Wightlink and cycle connectivity to/from the area.

Each of these areas are considered below.

Speeding

A number of speed surveys have been carried out over the last several years. These have been predominantly focussed at High Street, as this road with its 20mph limit had been the greatest cause for concern for residents. However, surveys of Pembroke Road and Broad Street have also been undertaken.

The results of these surveys yielded mixed results with the accuracy of a survey undertaken in 2014 questioned due to equipment failure; these have not been included below for that reason. A summary of the results from the various surveys are displayed below:

Road	Date	Av.Speed	85%ile Speed
High Street (20mph)	2013	23mph	28mph
	2015	21mph	25mph
Pembroke Road (30mph)	2013	21mph	25mph
Broad Street (20mph)	2013	20mph	26mph

These results were analysed in terms of the city's 20mph network and ranked as to the level of compliance. Compliance has historically been accepted by PCC as the amount of vehicles travelling below the prosecutable limit¹ (taken as 10% +2mph), so 24mph in the case of a 20mph speed limit.

The results recorded at High Street were higher than would ordinarily be expected for a 20mph limit, hence surveys were repeated in 2014 (void due to equipment failure) and then again in 2015. Following these surveys, officers felt that the data recorded did not warrant investment into calming measures as several other 20mph roads surveyed in the city returned higher speeds and/or had a greater rate of casualties. Since 2013, of the 20mph roads surveyed in Portsmouth High Street ranked 15th based on the 2013 survey. As of December 2018, 11 of the roads ranking higher than High Street (*ranking based upon quantitative survey data and Casualty KSIs) have either received traffic calming measures or have schemes committed for delivery in 2020.

An audit of 20mph signage was carried out in 2015 along Broad Street and High Street that highlighted some inconsistency and deficiency in speed limit signage, especially with regard to repeater signage. In 2015, remedial works were undertaken to bring the signage up to the required standard.

^{1. &}lt;sup>1</sup> ACPO Speed Enforcement Policy Guidelines 2011-2015: Joining Forces for Safer Roads



With such a keen interest in local traffic issues, a number of residents approached the Police with a view to setting up a community speed watch group. This was ultimately successful with a member of the OPTRSWG championing this initiative. A number of operations have since been carried out mostly focussed at High Street. These studies have shown speeds to be generally higher than that recorded by the radar survey equipment. This difference could be explained by the relatively short duration of speed watch operations (usually around 1 hour) compared to the speed surveys that are generally undertaken 24hours per day over at least 1 week.

Crossing assessments

A number of crossing assessments have been carried out in recent years following requests for crossing facilities to be provided. Much like the speed surveys, these assessments have concentrated on locations at High Street, Broad Street and Pembroke Road.

The PV² formula has traditionally been an accepted way of fairly and quantitatively determining the need for a formal crossing facility however use of a more qualitative assessment is now recommended as outlined in the recently released (Dec 2019) Traffic Signs Manual Chapter 6 (Traffic Control). Many authorities still use PV² to provide initial triaging of sites to ensure limited resources are not used on those sites that would never likely be suitable for a crossing point; the sites that pass this triage are then subject to a more qualitative site assessment.

The standard approach in Portsmouth is to use an enhanced version of the PV^2 formula (ADPV²) formally adopted by the Council in 2007², as this provides greater emphasis on local factors than the base PV^2 formula.

As well as taking into the account of Pedestrian movements (P) and Vehicle movements (V) at a location, the formula also included the Accident data (A) from the road and the Difficulty/Distance (D) to cross. Once all of these figures have been worked through the formula for each hour of the survey, an average of the four highest value is taken to give the result. Should the result be 100,000,000 (100 million) or more, the provision of a controlled crossing facility would be justified and the site would be added to a "primary" list to have a crossing installed once funding was available. Sites between 70 million and 100million are added to a "secondary" list however sites with values as low as 20million can be considered if there are other overriding local factors/issues.

The table below shows the previous crossing assessment locations and the results of those assessments.

Location	Date	ADPV ² Result
High Street/Peacock Lane	Sept 2014	34,000,000 or 0.34 x10 ⁸
	Apr 2015	39,000,000 <i>or</i> 0.39 x10 ⁸
Pembroke Road/Peacock Close	Apr 2015	156,000,000 <i>or</i> 1.56 x10 ⁸
Broad Street	Sept 2014	4,000,000 or 0.04 x10 ⁸

² Cabinet Member for Traffic & Transportation meeting 12th July 2007 (Item 6) - https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=176&MeetingId=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=176&MeetingId=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=176&MeetingId=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=176&MeetingId=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=176&MeetingId=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=176&MeetingId=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=176&MeetingId=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=176&MeetingId=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=176&MeetingId=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=176&MeetingId=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx?Committeeld=1864&DF=12%2f07%2f2007&Ver=2">https://democracy.portsmouth.gov.uk/CeListDocuments.aspx.portsmouth.gov.uk/CeListDocuments.aspx.portsmouth.gov.uk/CeListDocuments.aspx.portsmouth.gov.uk/CeListDocuments.aspx.portsmouth.gov.uk/CeListDocuments.aspx.po



The results show that aside from the Pembroke Road assessment, none of the sites yielded results high enough to justify a crossing because of the ADPV calculation alone. The result at Broad Street was extremely low and thus would not be considered further.

In terms of High Street, the results were not of a level to put the site onto the secondary list. When speeds and casualty data were considered, several other sites were ranked as higher priority to receive crossing facilities.

Whilst Pembroke Road did meet the necessary ADPV² value, the site already had a small pedestrian refuge and at that time had a school crossing patroller that covered school start and finish times that represented by far the two busiest hours of the day. For this reason, no further action was taken at that time.

As part of this study, a qualitative approach will be taken to consider other local factors into account in addition to the results of an ADPV² assessment.

Parking

Parking has proved a challenge within Old Portsmouth for a number of reasons. Primarily, the Residents' Parking Zone (KA Zone) has been oversubscribed (more permits issued than spaces available) since its inception. Therefore, residents have found that there often are not enough parking spaces to accommodate the demand. Residents living within controlled parking zones are able to purchase 2 permits per household; if the zone is undersubscribed residents can apply for a third permit.

In addition, there is a high demand for visitor parking throughout the day given the proximity to the seafront and historic attractions; there are also a number of popular pubs and restaurants attracting visitors throughout the day. Although there is a reasonable provision of pay & display parking, the residents' parking zone allowed for 2 hours free parking that often met the needs of many visitors thus removing parking opportunities from residents. This appeared especially prevalent amongst visitors to Gunwharf Quays, through the working group sessions there were many anecdotal accounts from residents witnessing shoppers parking in Old Portsmouth and walking across to the centre. It was felt that the close proximity made Old Portsmouth a popular place for shoppers to park as often 2-3hours would be enough to complete their visit and was an attractive gamble when considering the chances of being caught overstaying by Civil Enforcement Officers against the parking charges at Gunwharf Quays.

In order to combat the issue of visitors prioritising the use of 2hour limited wait parking over the available Pay & Display parking places, an amendment to the Traffic Regulation Order providing the control over KA Zone was advertised in December 2016. The proposal was to reduce the limited wait period from 2hours to 1hour, which came about following unprompted comments made during an earlier consultation regarding charging for parking permits. The consultation responses were presented to the Traffic & Transportation committee in February 2017 where the decision was taken by the Portfolio holder to implement the change. It was felt that by increasing the turnover of parked vehicles, there would likely be greater opportunity for residents and visitors alike to park in Old Portsmouth.

The council have also recently begun rollout of a network of smart parking sensors that will allow visitors to navigate to areas where parking is available thus reducing unnecessary mileage while searching for a space. The payment method for these smart parking bays also allow for a more flexible



tariff which only charge for the amount of time the bay is occupied rather than fixed hour-by-hour periods as is traditionally the case with pay & display parking.

Poynings Place

Residents of Poynings Place have experienced localised congestion and parking problems outside their properties at school pickup times for a number of years. Residents have experienced parents collecting children from St Jude's' primary school sat in idling vehicles, circling the close or parking across driveways preventing access to homes (see below images³). Whilst localised congestion at school pick up/drop off times is not unique to this area/school, some residents have experienced verbal abuse and physical threats from a minority of parents in the past when being asked to move their vehicles.



Images showing typical conditions at Poynings Place at school pick up times

Considerable efforts have been made to reduce these occurrences with residents, the school and PCC officers working together. Pay and Display parking spaces at Pembroke Road have been made available free of charge for parents at pick up and drop off times in order to encourage those pupils travelling to/from school to be dropped off at Pembroke Road and walking the last few hundred metres to school. This would prevent the parents of these pupils having to enter St Nicholas Street/Poynings Place to drop off/pick up thus relieving localised congestion after school. When available, Civil Enforcement Officers (CEOs) have been deployed to the area to discourage inconsiderate parking with some success; however, this is not a sustainable solution as many other schools also require enforcement and there is a limited number of CEOs to cover this.

Various permanent solutions have been consulted upon including temporary road closures of St Nicholas Street consulted upon in 2014 and most recently, one-way traffic only in St Nicholas Street and Poynings Place. Thus far none of the options discussed and/or consulted upon have proven viable or acceptable to a clear majority of residents. The school continues to circulate letters at the beginning of each school year to remind parents of their responsibilities and to encourage them to be considerate toward residents.

³ Images provided by local residents



Wightlink

There is been a long history of concern from local residents toward Wightlink as a result of Highway congestion experienced during delays to ferry services. A series of consultations with relevant stakeholders and residents several years ago resulted in an agreement between the Highway Authority and Wightlink to allow the closure of Gunwharf Road on a limited number of occasions through the year. These closure days were planned for peak demand days (generally bank holidays and weekends at the start and end of school holidays) and gave access to ABar and Viviers fish market via White Hart Road (requiring removal of bollard and temporary relaxation of prohibition of driving). The road closure was needed in order to stack vehicles on the road due to the terminal being too small to accommodate two ferry loads of vehicles. This agreement included the installation of diversion signage to be installed and removed by Wightlink staff on these allocated days.

In 2016, permission was granted for the construction of an upper deck to the terminal stacking area to increase capacity and facilitate double-deck loading onto ferries. The Old Portsmouth area experienced severe congestion during the build period despite PCC working closely with Wightlink to ensure the best use was being made of available stacking areas. Residents and businesses were left frustrated at the impact upon the highway network often preventing or severely delaying access to Gunwharf residents and to businesses at the Camber but also to the High Street.

The upper deck was completed in late 2017 and when services are operating to time, the terminal copes comfortably with storing vehicles and loading/un-loading vehicles however congestion continues to be an issue when sailings have been delayed. This has resulted in businesses at the Camber and residents of Gunwharf Quays being unable to get to their respective destinations. Following meetings, Wightlink has committed to putting internal contingency plans in place to deal with incidents when they occur. Whilst this is welcomed and when implemented has been shown to work, recent incidents during the summer of 2018 has shown that there is still work to do to ensure that the port reacts quickly and effectively to avoid severe impacts upon the road network.

PCC have trialled a temporary "snapshot" camera facing along St George's Road, access to which is afforded to the Wightlink controllers. This has proved valuable as it allows port controllers to keep "eyes on" the network and react accordingly. Issues with reliability of the temporary camera's 4G communication link has meant that PCC is now exploring a more permanent camera for this location with a fixed communication link. Temporary signage used during the construction of the upper deck was deployed to separate ferry traffic from local traffic and provide residents and businesses a greater chance of reaching their destination. It had been reported that there was confrontation between ferry customers and Gunwharf residents with the ferry customers wrongly believing that the Gunwharf residents were "queue jumping". One possible solution that improves road markings and signage to better deal with the occasions when excessive queuing occurs on the network is appended to this report.



Air Quality studies -

PCC has a wide NO_2 Diffusion Tube Network (NDDT), which monitors NO_2 around the city. A significant number of new passive NO_2 diffusion tube monitoring locations were added to this network last year in order to strengthen the information on levels of NO_2 at key locations in Portsmouth. Within the Old Portsmouth Study Area, there are five NO_2 monitoring locations included within the NDDT network at Chadderton Gardens, High Street, St Georges Road and two in Gunwharf Road.

The table below, from the PCC 2018 Annual Status Report shows the annual mean NO_2 monitoring results gathered at these locations over the past 5 years. Only 1 year of data is available for Gunwharf Road and St Georges Road, as monitoring was only started last year at these locations.

Annual Mean NO₂ Monitoring Results for locations within Old Portsmouth Study Area

Site ID	Location		NO ₂	Annual Mean C	Concentration (ug/m³)	
	-	2013	2014	2015	2016	2017	2018
2	Chadderton Gardens	16.5	16.55	15.74	17.4	16.38	17.09
3	High Street	22.1	25.67	24.07	25.75	23.7	24.13
55	Gunwharf Road					30.40	25.38
56	Gunwharf Road					36.17	35.09
58	St Georges Road					33.80	29.32

This data demonstrates that all sites within the NDDT network that are in the Old Portsmouth Study area are below the National Air Quality Objective for nitrogen dioxide of $40(\mu g/m^3)$, some significantly so. However, although NO_2 is below NAQO limits in the OP study area, the results of the 2019 ASR show that air quality remains a significant concern in another part of AQMA7 and in other parts of the city.

Environmental campaign organisation ClientEarth has challenged the government's Air Quality plans in the High and Supreme Courts for failing to include any actions necessary to achieve legal limit value for nitrogen dioxide in the shortest possible time. Because of this legal action, Portsmouth City Council has been issued with four Ministerial Directions. These place a legally binding duty on the Council to undertake a number of steps to improve air quality in the city, in particular to reduce air pollution concentrations across the city to within legal limits in the shortest possible time.

Government require Portsmouth City Council (PCC) to implement a Class B charging Clean Air Zone (CAZ) in order to reduce the nitrogen dioxide emissions to within legal limits across the city, with a focus on the exceedance locations. If legal limits of concentrations of nitrogen dioxide are not met by the end of 2022, PCC could be required to implement a more stringent CAZ i.e. charging more vehicles. A full business case to support the implementation of the CAZ will be completed by the end of 2020 with the CAZ due to be implemented by autumn 2021.

A number of local initiatives and events were run through 2018/19, which have provided further opportunities to raise the profile of air quality and encourage positive changes to support pollution



reductions, such as involvement in Clean Air Day in June 2018 and 2019. An anti-idling campaign was run during January to March 2019, to raise awareness of the need to reduce vehicle idling and encourage drivers to switch off vehicle engines when stationary. During this campaign, banners were displayed on lamp columns in some AQMA areas, information was displayed on billboards at key locations in the city, there was a four-week radio campaign, information was provided on social media and anti-idling posters were circulated to schools and some businesses, shopping centres and city attractions.

Shipwright's Way

The Shipwrights Way is a 50-mile long-distance walking, cycling and Bridal route which links villages and towns in East Hampshire through some beautiful countryside. It runs from Alice Holt Forest near Farnham, down across the South Downs to the sea at Portsmouth. The name reflects the use of oak grown at Alice Holt Forest for Tudor shipbuilding, linking this site with Portsmouth Historic Dockyard, home of the Mary Rose and HMS Victory⁴.

The last section of the route, between Hayling Island and Portsmouth Dockyard travels the length of the seafront, from the Hayling ferry at Eastney to Old Portsmouth and finally onto the Historic Dockyard. Whilst defined on the route maps, the route from the Garrison Church to the Dockyard is yet to be formally signposted. This is predominantly due to the severance posed by High Street and the difficulty encountered in providing a safe crossing for pedestrians and cyclists whilst being sympathetic to the historic surroundings.

Work to find a solution that is acceptable in terms of the visual impact upon the local street scene, adequately slows traffic and provides a safer environment for pedestrians/cyclists, and is feasible within the available budget has been ongoing for a number of years. The official route for the Shipwright's Way travels from the Garrison Church, along Grand Parade and across High Street to White Hart Road; however the observed "desire line" is along Battery Row emerging at the junction of High Street and Broad Street. The road geometry at this location is very wide creating a significant obstacle for persons wishing to cross and inviting high traffic speeds, however the challenging geometry makes a technical solution both difficult and costly to implement without significantly impacting upon the conservation area and provision of parking spaces.

It is currently intended to implement a scheme during 2021 subject to agreement with councillors and residents. Any schemes put forward as a result of this study should complement the Shipwright's Way scheme and follow similar principles of increasing the comfort and safety of pedestrians and cyclists.

⁴ Extract taken from https://www.visit-hampshire.co.uk/things-to-doshipwrights-way-p1344341



4b. Key issues for investigation

As highlighted within the scope at section 3, the scoping meeting held with members of the OPTRSWG and other stakeholders yielded some key areas of focus for this study.

The top issues identified by the study group were;

- Speeding
- Lack of road crossing facilities
- Air Quality
- School parking

Another key issue raised was that of parking, specifically the alteration of parking restrictions to allow only residents to park within the KA Zone at certain times of day, in part to give residents a greater chance to find a space when returning from work for instance. It was also seen as a potential solution for issues experienced at Poynings Place to prevent parents collecting their children from St Jude's' school. Whilst this is a reasonable suggestion worth consideration, it is felt that since the area has been subject to two separate consultations in the past 3years directly related to the operation of the residents' parking zone, further changes could cause confusion and public engagement would likely be low. In terms of the school, the short period of time that parents are present near the school would make enforcing the residents only parking very difficult to enforce. For these reasons, we have not investigated further alterations to the residents parking zone at this time however would not rule out the possibility of doing so in future. Potential solutions for Poynings Place are discussed later in the report.

Other issues raised included congestion caused by delays at the Wightlink ferry terminal, this issue was especially prevalent during the 2017 spring/summer period whilst construction works were ongoing at the Wightlink terminal however the is also risk of similar occurrences on peak days especially if services are disrupted in any way. Peak days typically include bank holiday weekends, weekends at the beginning/end of school holidays and the IOW festival weekend.



4c. Evidence gathering

In order to form an accurate picture of the traffic conditions/patterns present in Old Portsmouth, it was important to gather as much data as possible relating to the main issues raised within the scoping exercise.

As detailed in section 4a, significant work has previously been carried out on a variety of different issues in Old Portsmouth. This has resulted in the production of various data streams, predominantly relating to traffic speeds/counts and pedestrian crossing assessments. With the key issues identified within section 4b, it was decided that a fresh series of surveys should be undertaken to include traffic surveys (speed & volume), pedestrian surveys and a localised Air Quality study.

Anecdotal evidence has also been collated predominantly from enquiries and complaints received by the Council but also from officers, Councillors and residents with links to Old Portsmouth.

The Old Portsmouth Community Speed Watch (CSW) group provided an additional data set. The group aspires to conduct a speed education exercise for one hour every fortnight during periods when speeding is known to be worse. This target has been constrained by defective equipment and being limited to daylight hours. Nevertheless, the data set has shown that at peak periods even when traffic speeds are curtailed by congestion, 23 per cent of drivers exceed 24 mph; making them liable to prosecution by the police.

Traffic surveys

With input from members of the OPTRSWG, it was decided to conduct three surveys using PCC's own radar survey equipment. This equipment has previously been used to gather information and although the use of Automatic Traffic Counters (ATCs) was considered, the ability to accurately compare new data to existing data was considered important and as such, three radar survey units were deployed to High Street, Pembroke Road and Broad Street. The locations of these surveys were agreed with working group members prior to deployment of the equipment. The surveys began on 22nd January 2018 with the survey units at High Street and Pembroke Road running until 14th February 2018, the survey unit at Broad Street was still collecting data up until 16th February 2018 when the units were collected.

PCC undertake surveys over a 24hour period to give a complete picture of traffic conditions; however it is acknowledged that in areas where congestion occurs, the overall speed results may be lower than if only free flow conditions were analysed (as is recommended by DfT⁵). The speed analysis undertaken in the next section has been done using the 24hour data; however given the known congestion issue that occurs adjacent to the survey site at High Street a further level of analysis has been undertaken at this site following concerns of the working group about whether the 24hour speed results at High Street were reflective of the conditions actually experienced by residents.

Note: Owing to concerns about the reliability of the initial survey, a further survey was carried out at High Street in January 2019. Further information on this is include in section 4d(i).

⁵ DMRB CA185 http://www.standardsforhighways.co.uk/ha/standardsfor



Pedestrian counts

Crossing assessments have been carried out at a number of locations. Potential locations were discussed and agreed with members of the working group based on local knowledge and user experiences. The consensus amongst the working group is that there is a general lack of crossing facilities across the Old Portsmouth area and some very clear desire lines. These areas were focussed on, several of which have previously been subject to crossing assessments as detailed in section 4. Two sessions of pedestrian counts were undertaken, the first undertaken on a Sunday in December chosen due to the Christmas market that was being held at the ARTches (in the Hotwalls) on that day thus reflecting the greatest chance of a surveying a day that would give a reasonable reflection of the road conditions. The survey locations for this session were Broad Street/Feltham Row and Broad Street/Trimmers Court. The second session of counts was carried out on 10th January 2018 between 7am-7pm; these counts were undertaken at High Street/Pembroke Road, High Street/Peacock Lane and Pembroke Road/Pembroke Close.

Air Quality

As detailed above, part of Old Portsmouth is included within AQMA 7. In addition, following concerns from residents regarding congestion and air pollution in the Old Portsmouth area, particularly around local schools, PCC began the process of undertaking monitoring of the air pollution outside of St Jude's School, using a diffusion tube monitor. This monitoring began in December 2017, and continued for a period of 1 year, in order to obtain the annual mean concentration of NO2 at this location.

Other data sources

Enquiries and complaints received by Portsmouth City Council - Member of public reported numerous incidents of vehicles colliding with the traffic island in Pembroke road. This generally only happens during clear summer evenings when the sun is setting, vehicles travelling west are blinded by the glare obscuring their view of the pedestrian refuge and preceding road markings. Further examples of this occurred in July of 2018 with at least one vehicle colliding with the traffic island resulting in PCC putting in temporary measures in 2019 & 2020 to prevent further occurrences.

Casualty data - Stats 19 data extracted for key areas focussing on sites identified for potential pedestrian crossing locations.



4d. Findings

The following section examines the results of the data collected and picks out the key findings. A full representation of the data collected is appended to this report.

4d(i) Speed data

High Street

Following further analysis of the traffic volumes recorded during the survey period, a significant reduction was observed over previous surveys. Although the initial survey for this report took place at a different time of year to the previous surveys (referenced in part 4a), the reduction in volume exceeded what would normally be expected in terms of seasonal variation.

It was not possible to undertake a full set of surveys again; however, a repeat 1-week survey was carried out at High Street in November 2018 to validate the earlier results. An analysis of these results is below; the initial results and analysis of those results have been retained in the appendices for completeness.

	Vmin	Vmax	Vavg	V15	V50	V85	Vexc %
Cross-section	3	59	24	19	24	29	73.1
SB	3	52	24	19	24	29	69.6
NB	3	59	25	19	24	31	76.2

Vmax: Maximal velocity V85: Critical velocity for the first 85% of vehicles Vavg: Average velocity Vexc %: Speeding in % V15: Critical velocity for the first 15% of vehicles

The repeated survey registered a peak daily flow of 5496 vehicles, the average over the 7days was 4752 per day. The 5-day average was 5106. These averages are still well below the figures recorded in 2015, which suggests that traffic levels are in fact reducing albeit anecdotally the feeling is that traffic levels have increased in recent years.

In terms of speed, the results returned were higher than those of the initial survey with an 85th percentile speed (the speed that 85% of vehicles were travelling at or below) of 29mph and an average of 24mph; a significant increase over the earlier recorded figures of 23mph and 19mph respectively. Whilst this could in part be explained by the longer period of the earlier survey, the results are still significantly higher than would be expected on a 20mph road. The speeds for northbound traffic were noticeably higher than southbound traffic with northbound speeds of 31mph (85th percentile) and 25mph (average). Southbound speeds were 29mph (85th percentile) and 24mph (average). This is likely due to the presence of on-street parking along the southbound kerbside that can cause drivers to be more cautious and thus reduce speed.

Overall 73.1% of vehicles were found to be travelling above 20mph and 49% travelling above 24mph. The maximum speed recorded was 59mph; the vehicle was travelling northbound during the early



hours of the morning. The highest southbound speed was 52mph. Over the survey period, six vehicles were recorded travelling in excess of 50mph with 156 vehicles recorded between 41-50mph. Although concerning, this represents 0.5% of the total vehicles recorded. The highest speeds generally occur late in the evening or during the early hours of the morning likely due to the significantly reduced traffic volume affording drivers the opportunity to speed and the belief that they may be less likely to be caught speeding. Whilst the number of pedestrians and cyclists will also likely be significantly reduced at these times, and thus the probability of an RTI occurring also reduced; the likely severity of a casualty were it to occur will be greatly increased as a result of these high speeds.

The above analysis is based upon the 24-hour counts; High Street does suffer from known congestion especially during school pick up/drop off times and as such, the traffic during these times is not free flowing. As a result, it is possible that the 24-hour counts underestimate the average and 85th percentile speeds recorded especially given that congestion usually occurs on a delay basis during term time. As a "stress-test", the speeds recorded on weekdays between 0900-1100 & 1300-1500 have been reviewed to provide a basic comparison of "free flow" conditions against the 24-hour survey.

This review covered 5901 vehicles, of these vehicles only 708 were recorded travelling below the speed limit in these off-peak, free-flow conditions. 5193 vehicles travelled at or above the 20mph speed limit; 88% of all traffic recorded during these times. The average speed was 25mph and the 85th percentile speed was 30mph, each 1mph higher than the 24-hour figures. Overall, an additional 15% of vehicles were recorded travelling over the speed limit when compared with the 24hour figures.

Whilst the majority of each day (*when reviewed hour-by-hour) returned similar speeds, the peak hour between 0800-0900 had noticeably lower speeds. This suggests that the congestion caused by significant volumes of vehicles dropping off pupils to the two schools nearby does have an impact upon the overall (24-hour) results.

Broad Street

The survey captured 24 days of data recording in excess of 47k vehicles during that period. This represents an average of approx. 2000 vehicles per day over the survey period. The data is presented as a series of "speed bins" with recorded vehicles sorted according to their speed. An extract from the results is replicated below showing the "headline" figures.

14	Α	В	C	D	E	F	G	Н	I	J	K	L	1 M	0 1	P	Q	R
1	Date	Time	Class	C1 / 1 - 15	C2 / 16 - 1	C3 / 20 - 2	C4 / 25 - 3	C5 / 31 - 3	C6 / 37 - 5	C7/51-5	C8 / 56 - 6	5(C9 / 61 - 150		Total	Average	[Excess. sp	V85 [Mile,
57	553		Total volume	0	0	0	o	o	0	o	0	o		O	0	0	o
68	/1	Total glob	(M)Bikes	1322	389	293	160	23	5	o	O	o		2192	14	9	22
69	/2	Total glob	Cars	3099	6059	15788	12166	2290	302	3	O	O		39707	23	37	28
70	/3	Total glob	Vans	341	677	1890	1680	331	40	1	0	O		4960	23	41	29
71	/4	Total glob	HGV/Bus	39	92	175	116	11	o	0	0	o		433	22	29	27
72																	
73	Statistics		Total volume	4801	7217	18146	14122	2655	347	4	0	o		47292	22	36	28

As is shown in the above table, the average speed recorded during the survey was 22mph. The 85th percentile speed was recorded at 28mph. To put this in context, the speed limit of the road is 20mph and therefore the 85th percentile speed is higher than expected and represents an increase over the previous survey conducted at this location.

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As with High Street, a greater proportion of vehicles exceed 24mph between 20:00-08:00; however, the results show that approx. 25% of vehicles regularly travel faster than this during daytime hours; overnight this figure is approx. 60-70%. Weekday traffic volumes average approx. 140-160 vehicles/hour during off peak hours and slightly less at approx. 100-120 vehicles/hour during the AM/PM peaks. Overnight volumes were much lower as is to be expected; it was normal to have no vehicles recorded at all during the early hours however generally overnight an average of approx. 10 vehicles per hour was recorded.

The highest speeds recorded of 51-55mph were recorded on four separate occasions between the hours of 17:00-22:00. The next lowest speed bin (37-50mph) recorded 347 vehicles, these occurrences were recorded mostly during the evenings with some instances spread through "working hours". 3006 vehicles were recorded travelling over 30mph during the survey period, a considerable number of vehicles representing approx. 6.5% of the overall vehicles. Incidences of excessive speeding (>30mph) occurred fairly uniformly throughout the day suggesting that road conditions afford drivers the opportunity to speed at most times of the day.

When assessing the northbound and southbound results independently, the speeds recorded were marginally faster for vehicles travelling Southbound than Northbound. An average speed of 23mph and 85th percentile speed of 29mph was recorded for vehicles travelling Southbound whereas the northbound speeds were 22mph and 27mph respectively. The percentage of vehicles exceeding the prosecutable threshold (>24mph) was also higher for Southbound traffic at 40% opposed to Northbound traffic at 33%. One reason for this could be the proximity of the echelon parking bays located at the west side of Broad Street to vehicles travelling northbound; the presence of which may cause vehicles to proceed more cautiously due to the possibility of a vehicle emerging and/or a perceived narrowing of the road caused by the angle of the parked vehicles. Much of the parking in Broad Street is does not fit with the latest guidance of the laying out of echelon bays in a Reverse-In/Drive-out (RIDO) configuration.

Pembroke Road

The survey captured 24 days of data recording in excess of 116k vehicles during that period. This represents an average of approx. 4800 vehicles per day over the survey period. The data is presented as a series of "speed bins" with recorded vehicles sorted according to their speed. An extract from the results is replicated below showing the "headline" figures.

- 2	A	В	C	D	E	F	G	H	I	J	K	L	M	N	0	P	Q	R
1	Date	Time	Class	C1/1-15	C2 / 16 - 19	C3 / 20 - 24	C4 / 25 - 30	C5 / 31 - 35	C6 / 36 - 50	C7/51-55	C8 / 56 - 60	C9 / 61 - 80)		Total	Average	Excess. s	p V85 [Mile,
2758	/1	Total glo	(M)Bikes	1614	814	869	710	339	141	0	0	0			4487	19	3	29
2759	/2	Total glo	Cars	5523	5468	20744	37679	12495	3878	37	7	8			85839	26	5	32
2760	/3	Total glo	Vans	416	796	2975	9765	6020	2217	18	1	0			22208	29	10	34
2761	/4	Total glo	HGV/Bus	142	405	1208	1454	636	117	O	0	O			3962	25	3	32
2762	2																	
2763	Statistics		Total volume	7695	7483	25796	49608	19490	6353	55	8	8			116496	26	6	32
2764																		

As is shown in the above table, the average speed recorded during the survey was 26mph. The 85th percentile speed (the speed that 85% of vehicles were travelling at or below) was recorded at 32mph. To put this in context, the speed limit of the road is currently 30mph and therefore the speeds recorded would suggest that the speed limit is set at an appropriate level. It should be noted however that many residents feel that Pembroke Road should be consistent with High Street (and adjoining roads) and



have a 20mph limit where at present the 30mph limit in place around the seafront area continues into Old Portsmouth (via Pembroke Road).

A greater proportion of vehicles exceed 35mph between 20:00-08:00; however the results show that approx. 5% of vehicles regularly travel faster than the prosecutable threshold during daytime hours; overnight this figure is approx. 15%. Weekday traffic volumes average approx. 800-900 vehicles/hour during the AM peak and approx. 500 vehicles/hour during the PM peak. During off-peak hours, approx. 300-400 vehicles/hour were recorded. Overnight volumes were much lower as is to be expected; it was not uncommon to have less than 5 vehicles per hour recorded during the early hours however generally overnight an average of approx. 15-20 vehicles per hour was recorded.

The highest speeds recorded of 61-80mph were recorded on eight separate occasions, these occurred at various times of day including two occasions overnight. The next lowest speed bin (56-60mph) recorded a further eight vehicles with 51 vehicles recorded between 51-55mph, these occurrences were recorded mostly during the evenings with some instances spread through "working hours". A total of 6424 vehicles were recorded travelling over 35mph during the survey period, a considerable number of vehicles representing approx. 5.5% of the overall vehicles. Just short of 26k vehicles were recorded as travelling over the 30mph speed limit, this represents close to quarter of all vehicles (22.2%).

When assessing Eastbound and Westbound separately, the westbound flow is considerably greater than the eastbound flow by approximately 20k over the study period. There was some fluctuation in traffic flows recorded on weekdays ranging from approx. 2100 to 2500 vehicles per day eastbound. The traffic flow in a westbound direction has similar fluctuation with between approx. 3100-3500 vehicles on average per day travelling along Pembroke Road. The additional westbound flow could be as a result of the wide catchment for St Jude's' primary school attracting Pupil from across Portsmouth but could also lend weight to the observations of residents that drivers use Pembroke Road and High Street (and sometimes parallel routes such as Warblington St) to avoid the Terraces route which is often congested. This is attractive for traffic travelling northbound as once at A3 Cambridge Road, vehicles have priority over those travelling north along the Terraces - vehicles at Hampshire Terrace must give way to vehicles travelling around the Gyratory.

In terms of speed, vehicles travelling eastbound were recorded at far greater speeds than westbound traffic. Eastbound traffic was recorded at an average speed of 29mph and an 85th percentile speed of 35mph whereas Westbound traffic was recorded at an average of 24mph and an 85th percentile speed of 30mph. 11% of Eastbound traffic exceeded the prosecutable speed limit (>35mph) while just 2% of Westbound traffic was found to do this. This could in part be due to traffic queuing back from the junction of Pembroke Road with High Street. However, a more likely explanation is that Pembroke Road has two quite distinct environments; an area to the west with residential housing and narrow carriageway widths and an area to the east that is wider and provides a link to the Southsea Common/seafront area and significant on-street parking opportunity. The survey was carried out close to the transition of these areas and as such, there could be value in surveying each area independently to compare results.

The survey unit was placed to ensure that the known traffic queues that form back from the junction of High Street did not affect upon the survey results, however as per the High Street results, a basic review of free flow speeds has been undertaken. The average of 85th percentile speeds recorded



between 0900-1100 was 32.5mph; during the period 1300-1500, the average 85th percentile speed was 31.7mph. This broadly aligns with the 24hour figures however, contrasts with the average 85th percentile speed recorded during the AM peak of 29.5mph. This is likely a result of either congestion stemming from the junction with High Street or Pupil drop offs to St Jude's' school (or possibly a combination of the two).

4d (ii) Pedestrian counts

High Street/Peacock Lane

A 12hr pedestrian count was undertaken on Wednesday 10th January 2018, a neutral day during school term time. Peacock Lane is a one-way road exiting onto High Street; however, the enumerator observed that there were numerous occurrences of vehicles turning around in the junction and/or parking on double yellow lines at the junction to pick up/drop off children attending the local schools.

During the count period, 321 pedestrians were observed crossing the road, with the hour between 15:00-16:00 the busiest period of the day. The next busiest hour being 08:00-09:00. This would support the assertion that this site is popular for schoolchildren crossing the road. Overall, the hours outside of these two peak hours were quiet typically seeing approx. 20 pedestrians using the crossing point. Interestingly, the number of children crossing in the afternoon was considerably higher than in the morning suggesting that some children travel to school via different modes in the morning/afternoon.

When putting the recorded pedestrian numbers into the ADPV² formula (including weightings for vulnerable users - children & elderly), the top four values are averaged to give a result of 0.55 (x10⁸). This is below the result that would automatically justify the provision of a controlled crossing facility (e.g. Zebra or PUFFIN crossing) however other local factors such as the school can be considered alongside the ADPV² result to determine whether a crossing facility should be provided.

High Street/Pembroke Road

A 12hr pedestrian count was undertaken on Wednesday 10th January 2018, a neutral day during school term time. Pembroke Road is a two-way road joining High Street to the seafront area/Southsea Common. There are small traffic islands on the north and south sides of the junction with dropped kerbs at either side of High Street however the crossing point to the south is lacking the correct tactile paving.

During the count period, 1261 pedestrians were observed crossing High Street on either the north or south side of the junction. More pedestrians were observed crossing at the north side of the junction, approx. 100 more than at the south side. A large number of cyclists were observed travelling Northbound, some 290 cyclists opposed to just 31 travelling Southbound. The busiest period was again 15:00-16:00 however the afternoon into the evening was consistently busy with the morning period noticeably quieter. This could be in part due to the presence of a convenience store at the corner of High Street/Pembroke Road.

Overall, the ADPV² formula yielded a result of 0.27 (x10⁸). This is considerably below a result that would justify the provision of a controlled crossing and below the figure to be added to a secondary priority



list however is great enough to justify the site being considered for crossing facilities based upon local factors. (E.g., schools, high proportion of older residents and high level of visitors around the area).

Pembroke Road/Pembroke Close

A 12hr pedestrian count was undertaken on Wednesday 10th January 2018, a neutral day during school term time. The traffic count was centred upon a small set of traffic islands forming a pedestrian refuge close to the junction of Pembroke Road with Pembroke Close. The traffic island is used heavily by schoolchildren at the start and end of the school day and is manned by a School Crossing Patroller to aid children in crossing the road safely.

During the count period, 416 pedestrians were observed crossing Pembroke Road at the pedestrian refuge. The busiest period is between 08:00-09:00 reflecting the use by schoolchildren, the next busiest period was 15:00-16:00 again reflecting use following the end of the school day.

Overall, the ADPV² formula yielded a result of 0.93 (x10⁸). This is only slightly under the result that would justify a controlled crossing however given the proximity of a school and the heavy use by school children, there would be a case for this site to be included on a primary list for the provision of a controlled crossing facility - this might free up the SCP to cover another crossing point in the area that does not benefit from a controlled crossing facility.

Broad Street/Feltham Row

After consultation with members of the working group, it was decided that in order to obtain a more accurate picture of the quantum of pedestrians wishing to cross Broad Street, a survey would be carried out in December 2017 to coincide with a Christmas market at the Hotwalls Studios. It was felt that this area is very much dependent on visitor numbers and the use of this crossing point in particular is seasonal. Due to the time constraints we had in collecting data, it was felt this represented the best opportunity to capture an accurate representation of the road conditions.

A pedestrian count was carried out between 09:00-17:00 (beginning/ending an hour either side of the market opening time) on Sunday 3rd December. The site surveyed has an informal crossing point between Feltham Row (part of the Millennium chain walking route) and the west side of Broad Street adjacent to the Hotwalls Studios. There are dropped kerbs either side of the road but no tactile paving. Feltham Row is extremely popular for pedestrians travelling between Gunwharf Quays and the Hotwalls/Spice Island area with a natural desire line existing across Broad Street where Feltham Row ends.

During the count period, 1585 pedestrians were observed crossing Broad Street in the 8hr period; 789 of these crossed from east to west and 796 crossed west to east. This would suggest that the vast majority of visitors travelling on foot from Gunwharf Quays (or from the general direction of) return via the same route. There was a clear peak in numbers around lunchtime with numbers gradually building up to this through the morning and then tailing off through the afternoon.

Overall, the ADPV² formula yielded a result of $0.41 \, (x10^8)$. This is below the figure where provision of a controlled facility would be justified although could be considered as secondary priority if local factors were considered sufficient to justify such provision.



Broad Street/Seager's Court

A count at the junction of Broad Street with Seager's Court was also carried out at the same time as that described above. This route is well used by pedestrians following the Millennium chain walking route; the count indicates that the route is considerably more popular for pedestrians following the route back to Gunwharf Quays from Spice Island with over 6 times more pedestrians travelling this direction than toward Spice Island.

400 pedestrians were recorded during the count period, 347 of which crossed from North to South and 53 from south to north. The count profile reflected that experienced at Broad Street/Feltham Row with numbers gradually increasing through the morning, peaking around lunchtime and then gradually tailing off through the afternoon.

Overall, the ADPV² formula yielded a result of just 0.036 (x10⁸). This figure is well below a result that could justify the provision of a controlled facility; that said, the uncontrolled crossing point does not have the required tactile paving and could risk the safety of visually impaired pedestrians. While a controlled facility may not be appropriate at this location, the uncontrolled crossing point should be brought up to standard.

4d(iii) Casualty Data

Casualty data has been extracted for the key roads within Old Portsmouth. This does not include near misses or accidents that did not result in a casualty which for the most part go unrecorded. The City Council has been trialling a system to collect cycling near misses. Some relevant data collected through this system is also included in this review.

High Street

Casualty stats for High Street are low with just three incidents recorded in a 5-year period. The two incidents are detailed below:

Crash Date: Thursday, October 02, 2014 Time of Crash: 08:30:00 Vehicle 1: Pedal cycle Vehicle 2: Car Casualty 1: Rider

Description: Pedal cycle proceeding along carriageway, vehicle turning left from High Street collides

with cycle

Crash Date: Tuesday November 18, 2014 Time of Crash: 19:20:00

Vehicle 1: Car Casualty 1: Pedestrian

Description: Car turning right from Peacock Lane collided with pedestrian crossing from Driver's

nearside and masked by parked vehicle

Crash Date: Wednesday November 8, 2017 Time of Crash: 16:15:00

Vehicle 1: Car Vehicle 2: Car Casualty 1: Pedestrian (driver of Vehicle 1)

Description: Pedestrian in carriageway (not crossing road) taking pupil to/from school



Each of these incidents occurred in different parts of High Street with different classes of road users involved, it could therefore be concluded that there is not a pattern to the incidents in High Street. The first incident occurred as a result of a driver failing to look properly when pulling out into a junction and cannot be attributed to the road layout.

The information provided for the second incident does not detail whether the vehicle masking the pedestrian was legally parked however the fact a pedestrian was crossing at this location concurs with the assertion that a desire line exists across High Street near Peacock Lane and perhaps if a crossing facility were present, the accident could have been averted. Equally, if the car masking the view of the pedestrian was illegally parked, the incident could have been averted had the vehicle not been there.

Anecdotally, the enumerator observed several vehicles pull up on Double Yellow lines on High Street at the junction of Peacock Lane to collect/drop off children and therefore an illegally parked vehicle could well have been the cause of the incident. That said, whilst there is evidence of a vehicles stopping on double yellow lines on a regular basis, there have not been any other accidents here thus without a clear pattern it is difficult to be sure that this was the cause of the accident.

The third incident would appear to involve a parent dropping off a child being struck as they stepped out of their vehicle. That vehicle is described as being parked in the carriageway and is therefore likely to have been parked on Double Yellow Lines while taking a child to Portsmouth Grammar School. It is therefore reasonable to conclude that the incident has occurred because of the way the vehicle was parked rather than the lack of suitable crossing facilities (the zebra crossing was within close proximity).

Cambridge Road/ Museum Road roundabout

There were two accident clusters at this site, at the junction of High Street there were two reported incidents and at the junction of Cambridge Road a cluster of six incidents, one of which on the 26 Jun 2015 was brought to the council's attention by a member of the working group.

Crash Date: Thursday, October 2, 2014 Time of Crash: 8:30:00 Vehicle 1: Pedal Cycle Vehicle 2: Car Casualty 1: Rider

Description: Vehicle 1 proceeding normally along the carriageway, not on a bend; Vehicle 2 is in the

act of turning left.

Crash Date: Friday, December 18, 2015 Time of Crash: 15:50:00 Vehicle 1: Car Vehicle 2: Pedal Cycle Casualty 1: Rider

Description: Vehicle 2 proceeding normally along the carriageway, not on a bend; Vehicle 1 is in the

act of moving off (entering roundabout).

Crash Date: Monday, May 7, 2018 Time of Crash: 15:30:00 Vehicle 1: Pedal Cycle Vehicle 2: Car Casualty 1: Rider

Description: Vehicle 1 proceeding normally along the carriageway, not on a bend; Vehicle 2 is in the

act of turning left (exiting roundabout).

Crash Date: Friday, June 26, 2015 Time of Crash: 18:07:00 Vehicle 1: Car Vehicle 2: Pedal Cycle Casualty 1: Rider



Description: Vehicle 2 proceeding normally along the carriageway, not on a bend; Vehicle 1 is in the act of moving off (entering roundabout).

Crash Date: Wednesday, January 31, 2018 Time of Crash: 14:20:00

Vehicle 1: Car Vehicle 2: Pedal Cycle Casualty 1: Rider

Description: Vehicle 2 proceeding normally along the carriageway, not on a bend; Vehicle 1 is in the

act of moving off (entering roundabout).

Crash Date: Friday, April 20, 2018 Time of Crash: 11:45:00

Vehicle 1: Taxi/PHV Vehicle 2: Pedal Cycle Casualty 1: Rider

Description: Vehicle 2 proceeding normally along the carriageway, not on a bend; Vehicle 1 is

proceeding normally along the carriageway, not on a bend. Front of Veh 1 impacts nearside of Veh 2.

Crash Date: Monday, October 26, 2015 Time of Crash: 08:10:00

Vehicle 1: Pedal Cycle Vehicle 2: Goods vehicle >7.5t Casualty 1: Rider

Description: Vehicle 2 proceeding normally along the carriageway, not on a bend; Vehicle 1 is proceeding normally along the carriageway, not on a bend. Front of Veh 2 impacts rear of Veh 1.

Crash Date: Friday, April 27, 2018 Time of Crash: 17:22:00 Vehicle 1: Car Vehicle 2: Pedal Cycle Casualty 1: Rider

Description: Vehicle 2 proceeding normally along the carriageway, not on a bend; Vehicle 1 is proceeding normally along the carriageway, not on a bend. Front of Veh 1 impacts nearside of Veh 2.

What is abundantly clear from these stats, is that cyclists are most vulnerable at this junction (as they are at many junctions) of all users. The larger cluster is to the north east side of the roundabout and could perhaps be explained by the good visibility to the right (towards St Georges Rd) when travelling south along Cambridge Road.

Each of the incidents are extremely similar in nature and would seem to suggest that drivers are not noticing cyclists that are already travelling around the roundabout. None of these incidents have occurred in a period of darkness and therefore this cluster of incidents cannot be put down to the cyclists not being visible enough.

It is recommended that possible future interventions are explored by the road safety team; in the immediate term, new "Think Bike" signage is to be installed at the roundabout to reinforce the presence of cyclists to drivers entering the roundabout.

Broad Street

Casualty stats for Broad Street are low with just two incidents recorded in a 5-year period. The two incidents are detailed below:

Crash Date: Friday, May 30, 2014 Time of Crash: 8:49:00 Vehicle 1: Van/LGV Casualty 1: Pedestrian

Description: Van proceeding along Broad Street collided with pedestrian crossing from Driver's

offside



Crash Date: Saturday, April 18, 2015 Time of Crash: 14:52:00

Vehicle 1: Van Casualty 1: Pedestrian

Description: Van proceeding around left hand bend collided with pedestrian crossing from Driver's

nearside and masked by parked vehicle

Each of these incidents occurred in different parts of Broad Street however both involved pedestrians attempting to cross the road, at least one of which did so from behind a parked vehicle thus obscuring the view between driver and pedestrian.

This particular incident occurred at the bend when Broad Street meets High Street, a site characterised by an extremely wide stretch of road with the added complexity of a minor road junction (Battery Row) on the apex of the bend. The need for a facility to aid pedestrians/cyclists to cross High Street has previously been identified to be delivered as part of the completion of the Shipwright's Way route.

The first incident happened further north on Broad Street between Feltham Row and Tower Alley where the road is broadly straight with a significant amount of car parking on both sides of the road. Again the casualty was a pedestrian attempting to cross the road, it is unknown whether the pedestrian was obscured by a vehicle however given the lack of formal crossing points and high level of on-street parking provision it is certainly possible that this was the case.

Pembroke Road

Pembroke Road has a higher level of recorded casualties than both High Street and Broad Street with 5 incidents in a 5year period. The details of each incident are recorded below:

Crash Date: Saturday, December 28, 2013 Time of Crash: 9:37:00

Vehicle 1: Car Casualty 1: Driver of vehicle

Description: Car proceeding along Pembroke Road collided with Lamp Post

Crash Date: Thursday, May 21, 2015 Time of Crash: 17:45:00 Vehicle 1: Pedal cycle Vehicle 2: Car Casualty 1: Cyclist

Description: Car turning right from Victoria Avenue into Pembroke Road and collided with cyclist

Crash Date: Wednesday, November 30, 2016 Time of Crash: 14:36:00

Vehicle 1: Car Vehicle 2: Car Casualty 1: Driver (vehicle 2)

Description: Vehicle 1 passing vehicle 2 collided with rear of vehicle 2 and subsequently collided with

wall off carriageway

Crash Date: Friday, January 20, 2017 Time of Crash: 14:36:00 Vehicle 1: Car Casualty 1: Driver (vehicle 1)

Description: Vehicle 1 proceeding along Pembroke Road and collided with wall off carriageway

Crash Date: Tuesday, February 07, 2017 Time of Crash: 13:30:00

Vehicle 1: Car Vehicle 2: Car Casualty 1: Driver (vehicle 1) Casualty 2: Passenger (vehicle 1)

Casualty 3: Passenger (vehicle 1) Casualty 4: Passenger (vehicle 2)

Description: Vehicle 1 proceeding along Pembroke Road and collided with Vehicle 2 parked in

carriageway



Only one of the incidents involved a vulnerable road user, a cyclist struck by a right turning vehicle which can be attributed to a careless driver rather than any fault with the road layout. The other four incidents all involve drivers colliding with stationary objects either on or off carriageway however the causes of these incidents is not known.

Anecdotal evidence related to the incident of January 20, 2017 suggested that the incident occurred as a result of a medical incident and therefore cannot be attributed to the road layout. The remaining three incidents are less clear, it is possible that speed played at least a part in these incidents however there is no way to confirm this. It is however notable that the number of incidents is somewhat higher on Pembroke Road, a 30mph road, than both High Street and Broad Street which are both subject to a 20mph limit.

Although not officially recorded, the Highway Authority were made aware of a series of incidents that have occurred over a number of years around the time of the summer solstice. Local residents have reported that vehicles travelling west along Pembroke Road are often met by severe glare from the sun as it sets generally between 19:30-20:00hrs for a 5-6week period. At approximately the point at which vehicles experience this glare, a traffic island is present just beyond a series of echelon parking bays on the nearside of the westward travelling vehicles. The glare obscures the view of this island which has resulted in several vehicles overrunning the island and colliding with the bollards located on top of the islands. This is especially concerning as the traffic island is used as a pedestrian refuge, fortunately none of the incidents have involved pedestrians thus far however following incidents in consecutive years, it is clear that there is a problem even if the problem is only present for a few weeks per year. A revision of the road markings/parking bays was carried out in June 2020 to address the problem; the measures appear successful however were combined with the temporary barriers. The scheme will be reviewed again following next year's solstice. This should not preclude any potential review of the speed limit/crossing facilities at Pembroke Road should this be seen as appropriate as an outcome of this report.

St Georges' Road

St George's Road is at the edge of the study area however is a key route linking the Wightlink ferry terminal to the strategic road network. A total of 4 incidents were recorded in a 5year period.

Crash Date: Wednesday, October 30, 2013 Time of Crash: 17:03:00 Vehicle 1: Car Vehicle 2: Car Casualty 1: Driver (vehicle 2)

Description: Vehicle 1 proceeding along St Georges Road when vehicle 2 turns right out of Armory

Lane and collides with Vehicle 1

Crash Date: Thursday, March 05, 2015 Time of Crash: 17:32:00 Vehicle 1: Car Vehicle 2: Car Casualty 1: Driver (vehicle 2)

Description: Vehicle 1 performing a U-turn in the road collides with Vehicle 2

Crash Date: Thursday, April 23, 2015 Time of Crash: 7:45:00 Vehicle 1: Car Vehicle 2: Motorcycle Casualty 1: Rider (vehicle 2)

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Description: Vehicle two passing another moving vehicle when Vehicle 1 collides with Vehicle 2 whilst turning right to Warblington Street

Crash Date: Wednesday, October 28, 2015 Time of Crash: 19:56:00

Vehicle 1: Car Vehicle 2: Car Vehicle 3: Car Casualty 1: Passenger (vehicle 2)

Description: Vehicle 1 coming to a stop when Vehicle 2 stops suddenly and vehicle 3 collides with

Vehicle 2 causing vehicle 2 to impact with vehicle 1

Only one of the incidents involved a vulnerable road user (motorcycle); this seemingly occurred as a result of a right turning vehicle not expecting the motorcycle to be overtaking another vehicle and can be put down to driver error/carelessness.

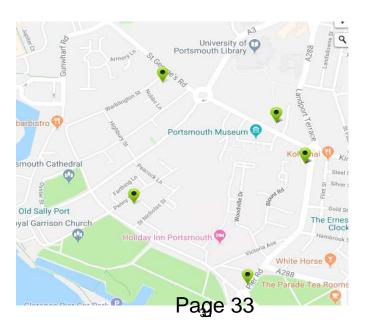
The latest incident involved rear-end shunts amongst several vehicles. What is not clear is whether the incident was caused as a result of standing traffic (an occurrence that does sometime occur as a result of delays to IOW ferries) or simply as a lack of concentration on the part of Vehicle 3.

The remaining two incidents appear to have occurred as a result of drivers not taking due care and not as a result of any inherent fault with the road layout.

Near miss initiative

Portsmouth City Council have launched a near miss reporting tool to allow cyclists to report "near miss" incidents that are ordinarily not recorded anywhere else. It was launched in the hope of providing a richer dataset to identify areas of the road network that are particularly hazardous to cyclists.

The tool has provided very successful with a high number of reports received during the 6-month trial period. When reviewing the data, it is possible to focus on the study area covered by this report to look for any clusters/patterns. The wider Old Portsmouth area saw six individual reports (five shown below a further incident was reported directly to PCC Traffic). These were not grouped in any noticeable way and appear to be isolated incidents.





King's Road roundabout

The roundabout at the junction of King's Road and Museum Road is outside of the study area however at the specific request of Councillor Wood (Ward Councillor for St Thomas ward) this junction has been included in the report. There have been 15 recorded accidents in the past 5 years either at the roundabout or on the immediate approaches to the roundabout; 14 of these involved cyclists.

The number of accidents makes it impractical to reproduce each incident within the main body of the report however; a full representation is included within the appendices. As above, all but one of the accidents involved pedal cycles and previous works at the roundabout have been aimed at reducing these incidents. The numbers of accidents have been reasonably consistent over each of the 5 years with the exception of 2016 that had a single recorded accident. The remaining years had 3, 3, 4 & 4 accidents respectively in 2013, 14, 15 &17.

The majority of accidents involving cyclists have involved cycles travelling east-west (or vice-versa) being impacted by vehicles travelling north-south (or vice-versa). This would suggest that the vehicles involved in these accidents are perhaps arriving at the junction too quickly and then failing to see the cyclists navigating the roundabout and/or that the forward visibility for vehicles travelling north-south is great enough to encourage higher than appropriate approach speeds.

The junction has significant areas of high friction surfacing marking out ghost-islands to create the illusion of deflection with the intention of slowing vehicles. The evidence would however suggest that these ghost island markings are regularly overrun and therefore fail to adequately slow vehicles entering and existing the roundabout. The junction requires further improvements including the implementation of engineering measures to address the aforementioned issues; funding should be sought as a priority measure.



4d(iv) Air Quality

Following the installation of a diffusion tube monitor near St Jude's school, data for 2018 &2019 is available. The first 18mo approx. were recorded close to St Jude's school on lighting column 7, this was raised by members of the working group as perhaps not an optimal location for monitoring vehicle emissions. The diffusion tube was then moved in July 2019 to be closer to where the majority of traffic passes; this unit was placed near 23 St Nicholas Street:

ID Jan Fe b Mar Apr May Jun Jul Aug Sep Oct Nov Dec Raw Data Adjusted (0.891) and Annualis ed (1)						201	8 - NO ₂	Mean	Concen	tration	s (μg/m	1 ³)			
Site ID Jan Fe b Mar Apr May Jun Jul Aug Sep Oct Nov Dec Raw Data Adjusted (0.891) and Annualis ed (1)														Annual N	lean
26.5		Jan	 Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Adjusted (0.891) and Annualis	Distance Corrected to Nearest Exposure (²)
141 19.09 6 25.51 21.45 29.03 18.17 22.60 19.02 21.14 26.27 23.29 21.51 ^{22.80} ^{20.32}	141	10.00	 25 51	21 /5	20.02	10 17	22.60	10.02	21 14	26 27	22.20	21 51	22.80	20.32	

						201	L9 - NO	₂ Mean	Conc	entrati	ons (μg	/m³)			
														Annual M	lean
Site ID	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Raw Data	Bias Adjusted (0.84) and Annualised	Distance Corrected to Nearest Exposure (²)
141	28.68		16.88	24.91	19.10	16.23							21.16	16.92	
142	·						18.97	16.03		19.83	24.18	16.12	19.03	17.67	

The results above illustrate that the levels of NO2 at both locations are relatively low. Whilst the mean was slightly higher in 2019 once relocated, the overall mean was higher in the original position in 2018. This could be for a number of reasons, including natural upgrade of the fleet to cleaner vehicles, measures to encourage park and walk and the "Stomper" initiative promoted to school children to increase active travel. The National Air Quality Objective for nitrogen dioxide is 40ugm³ and all of the readings recorded above are significantly below this amount.

4d(v) School streets

As discussed in section 4a, residents of Poynings Place and St Nicholas Street have suffered congestion and inconsiderate parking at school pick-up and drop-off times associated with the nearby St Jude's Primary School. Residents have previously been consulted upon restricting access to the roads at school pick-up and drop-off times or restricting travel to one-way only to prevent "circling" of Poynings Place however each of these proposals were rejected by residents.



The issue of congestion around schools is not unique to this school or the city of Portsmouth; Sustrans have pioneered a "school streets" initiative beginning in Hackney, East London. The aim of the scheme was to encourage more pupils (and their families) to walk and cycle to school and improve air quality by reducing traffic movements and congestion directly outside schools.

This was achieved in Hackney by applying restrictions on motor traffic entering the roads around the school between 8.15-9.00 and 15.15-16.00 with an exception made for residents with parking permits for that zone. This is similar to the proposal previously consulted upon with residents with the addition of an exception for residents' access. It is not however clear how or if this is practically enforced which would present the biggest stumbling block to such a scheme in Portsmouth. It would in theory achieve the desired outcome to remove school traffic from the road considerably reducing the amount of traffic movements and greatly reducing the likelihood of conflict between parents and residents. Parents could still make use of the parking available at Pembroke Road and walk their children the last few hundred yards to the school gates which could be made more attractive if improvements to the crossing facilities can be made at Pembroke Road.

Road Safety officers have previously worked on a proposal to introduce school streets across Portsmouth. Assessment of a number of school sites was carried out taking into account a number of factors including rate of casualties nearby, parking enforcement records and proximity to Air Quality management areas amongst other parameters and concurrently looking at whether these schools had already had already had interventions by the Road Safety team. The interventions from the road safety team that have traditionally been used at schools in Portsmouth with a perceived road safety issue are educational programmes such as Pompey Monsters and Bikeability or infrastructure delivered through safer routes to school. By applying scoring to these measures, this allowed the various school sites to be ranked in order of the greatest perceived need of further, more significant intervention.

Of 50 schools scored, St Jude's school ranked 32nd in terms of perceived need, however many of the schools between 11th-27th places scored relatively similarly, the top 10 were noticeably higher scoring in terms of need. Therefore, given the need in terms of road safety at other schools, the fact that there is 20mins free parking permitted nearby for parents of St Jude's school, and due to the local residents' previously rejecting the proposal of a temporary road closure, the road safety team have not pursued a school street at St Nicholas Street (Poynings Place) to date. Following the release of funding from central government aimed at increasing physical activity as the country recovers from the Coronavirus pandemic, the Safer Travel team have successfully secured funding from the Emergency Active Travel Fund (EATF) to deliver a number of school streets in 2021. A further prioritisation taking into account need, and most importantly, deliverability within the funding term was carried out and St Jude's' School selected to move forward for development of a school street scheme. It is expected that consultation on this scheme will begin in Spring 2021.



5. Other issues arising

During the production of this report, residents of both Gunwharf Quays and the Gunwharf Gate development with regard to specific traffic issues they had experienced approached the PCC Traffic & Network Management Team. These issues were outside of the original scope of the study however, given that the areas are within the Old Portsmouth area, they are pertinent to this report.

5a. Gunwharf Quays

Representatives of the two management companies responsible for the residential areas of Gunwharf Quays raised issues with the number of vehicles entering the south gate of Gunwharf Quays, many of which are Taxis, to pick up and drop off and even park in spaces reserved for residents. The residents also expressed concern at the interaction between vehicles and pedestrians crossing Gunwharf Road, a concern shared with residents at Gunwharf Gate and subsequently explored in the next section (5b).

To combat this, enforcement of the area has been stepped up, as is the right of the management companies given that none of this area is public highway. This however has resulted in Taxis dropping off outside the gates on Gunwharf Road, often pulling onto pavements and waiting on Double Yellow Lines. This causes obstructions for vehicles disembarking the Wightlink ferry services but more so, presents a hazard for pedestrians; given the extremely high footfall through this area during the summer season, this is a cause for concern.

Outside of the main gates, Gunwharf Road is subject to No Waiting and No Loading restrictions and therefore Civil Enforcement Officers are able to robustly enforce the area when required. However, many drivers that flout the restrictions will simply drive away when an enforcement officer is in the area, and without the ability to enforce moving traffic offences using cameras, these behaviours are difficult to police. The enforcement of moving traffic offences can currently only be carried out by the Police; whilst the Traffic Management Act 2004 (TMA) allows for civil enforcement of such outside of London, secondary legislation is required to be passed by Parliament before these powers can be used by Local Authorities.

A simple solution to prevent the risk to pedestrians is to install bollards along the kerb edge, this will prevent vehicles mounting the pavement and therefore it is recommended that this be explored further.

5b. Gunwharf Gate

A resident representative for the Gunwharf Gate development has raised a number of issues experienced by their community related to traffic movements within and immediately surrounding the development.

The main issues were related to speed of vehicles through the development and the difficulty for residents crossing Gunwharf Road to Gunwharf Quays when making use of a private gated entrance. The roads within the development are a series of cul-de-sacs and private parking courts all subject to a 30mph speed limit; an anomaly when considered against the approach taken (20mph for residential roads) in other similar roads in the city. A further issue was identified at the junction of Armory Lane with St Georges Road where residents have witnessed vehicles performing turning movements in the mouth of the junction and running over pavements in the process. This is a similar issue to that



occurring at Gunwharf Quays (as described above) and could be solved by the installation of bollards on each of the corners at the junction.

To address the speeding and crossing concerns, a radar survey was carried out in Armory Lane in May 2019 and a crossing assessment carried out on a weekday and a Saturday in July 2019 to review the behaviour of vehicles and pedestrians and ascertain whether any further action was required. The results of each of these surveys are detailed below;

5b (i) Speed survey

A radar survey was carried out in Armory Lane for approx. 2 weeks to monitor traffic movements. In total, a little over 6000 vehicle movements were recorded during the survey with an average of 418 movements on weekdays and 348 on weekend days.

Overall, the survey returned an average speed of 19mph and an 85th percentile speed of 24mph. When considering the recommended speed measurement periods of 0900-1100 & 1300-1500, speeds for each were measured at 23.25mph & 23.85mph respectively. These results are, in the context of a 30mph limit, very good. However, the characteristics of the road are more representative of a 20mph road, and the results returned are more reflective of results of surveys in other residential roads subject to a 20mph limit in the city.

When assessed as a 20mph limit, the number of drivers exceeding 20mph is 2494 (approx. 46%). Those exceeding 24mph (the discretionary threshold for prosecution) totalled 727, or 12%. These figures, whilst clearly not perfect, represent at least as good as, if not better performance than many other 20mph residential roads in Portsmouth. Therefore, it is recommended that the areas of public highway in Armory Lane (and Beehive Walk, Gray's Court) be taken forward to consultation on the reduction of the speed limit to 20mph to remain consistent with PCC's approach to setting speed limits in residential roads.

5b (ii) Crossing assessment

The Gunwharf Gate development has a private gated access onto Gunwharf Road that only residents have the use of. This access is broadly opposite the south gate for Gunwharf Quays and provides a pedestrian route into Gunwharf Quays. Anecdotal evidence suggests that there is a pedestrian desire line across Gunwharf Road for pedestrians travelling between Gunwharf Quays and St Georges' Road, but also for the residents of Gunwharf Gate. The residents at Gunwharf Gate have requested a Zebra Crossing in this location to help pedestrians cross the 3 traffic lanes present.

A pedestrian survey was undertaken on a neutral weekday, but also at a weekend when footfall is known to be greater; these figures are also likely to be more reflective of school holiday periods. In total, 962 pedestrians were observed crossing the road in this location on the weekday with the busiest hour between 1800-1900; however numbers were fairly consistent from 1300 onwards and throughout the afternoon.

On the Saturday, 1082 pedestrians were recorded, which meets the expectation that footfall is usually busier on the weekends, however not significantly so. The busiest hour was 1400-1500 with approx. 180 people crossing (both directions); as would be expected at a weekend, the quietest period was between 0700-1000.



When putting the recorded pedestrian numbers into the ADPV² formula (including weightings for vulnerable users - children & elderly), the top four values are averaged to give a final result of 0.4 (x108) for the weekday, and 1.31 (x108) for the weekend. Despite, only slightly higher numbers of pedestrians crossing, there were considerably more vehicles using the road on the weekend, likely in relation to the IOW ferry service, thus increasing the difficulty in crossing the road and returning a significantly higher value. The weekend results would automatically justify the provision of a controlled crossing facility (e.g. Zebra or PUFFIN crossing) however the weekday result could make a secondary list when considering other local factors. Overall, the location is a reasonable contender for a facility should a technical solution be available.

Given the width of the road, high density of HGV traffic and speed of traffic at times; also the increased likelihood of standing traffic associated with the ferry terminal, a Zebra style crossing is not suitable. A traffic light controlled crossing (PUFFIN) would be the correct solution should a scheme be progressed in this location.



6. Summary

Whilst the issues experienced in Old Portsmouth are not necessarily unique to that area, the demands placed upon it in terms of traffic & transport are more exceptional given the numerous attractors in the area conflicting land-uses and blend of more modern residential development overlaid on a historical road layout.

There is a high demand for road space, especially in terms of parking spaces, generated by residents and visitors alike. This is reflected by high levels of permit issue for the controlled residents' parking zone in place across Old Portsmouth and pressure on pay & display parking areas, especially during the summer season. With the exception of St George's Road, the main roads within the study area could not be described as "through roads" and are predominantly used by drivers with a need to be in this area (residents, tourists, businesses etc.). That said, there is a feeling that congestion on other routes has led to vehicles rat-running along Pembroke Road and High Street in order to avoid this congestion. The findings of the traffic surveys would go some way to support this with considerable increases of traffic during the AM peaks although the presence of two schools could in part explain this.

Overall, speed surveys undertaken on the major roads in Old Portsmouth suggest significant levels of non-compliance with the posted speed limits. Based on the 24hour results, all of the roads recorded 85th percentile speeds in excess of the speed limit with High Street and Broad street significantly so. Each had significant numbers of drivers breaking the speed limit, as high as 73% at High Street; with 85th percentile speeds 8mph and 9mph above the posted speed limit at Broad Street and High Street respectively. Both of these sites also showed a significant number of vehicles exceeding the discretionary limit at which the Police will consider prosecution (24mph - following the 10% +2 theory). Following issue of this report, further consideration should therefore be given to speed reduction measures in Broad Street and High Street with input from the wider project group as to the nature and location of these.

At Pembroke Road, there were also significant numbers of drivers not adhering to the posted speed limit albeit the scale to which this occurred was not as great as at Broad Street and High Street especially. The 85th percentile speed recorded was 32mph, 2mph over the posted speed limit with approx. 22% of drivers exceeding the 30mph limit. Taken at face value, it would appear that the speed limit is broadly suitable for the road however it is recommended that further surveys be carried out for each of the different areas of the road to study any difference in driver behaviour. At this stage, it is not recommended to consider speed reduction measures in isolation until further work has been carried out. It may however be beneficial to consider other measures such as new crossing points to aid with the calming of traffic.

A later request for a traffic survey at Armory Lane returned results that would suggest a change from the existing 30mph limit to a 20mph limit would be appropriate. This would be consistent with other similar roads in Portsmouth and with national guidance⁶ for this type of road. It is recommended that a proposal to reduce the speed limit is progressed to feasibility and consultation.

The crossing assessments undertaken to establish the key desire lines were, unlike the speed surveys, less conclusive and in isolation would be unlikely to merit an intervention. The results did however

⁶ Manual for Streets 7.4 "Achieving appropriate traffic speeds" & DF circular 01/2013 "Setting Local Speed Limits"



clearly demonstrate that a desire line did exist in the majority of the locations surveyed and whilst perhaps the results did not meet the usual qualifying thresholds (based on quantitative data), when considering the local environment and the results of the speed/volume surveys, there is an opportunity to positively affect both issues with a single measure. Therefore whilst comprehensive traffic calming schemes/ 20mph Zones are perhaps unfeasible due to cost, it is recommended that isolated features be investigated to provide a level of traffic calming but also a clearer, safer pedestrian crossing point in several locations. A later crossing survey at Gunwharf Road did exceed the ADPV² value to justify a controlled crossing facility without also considering other local factors and as such should be progressed to a feasibility stage.

The casualty analysis undertaken in this study did not identify specific areas for concern other than the roundabout at the junction of Cambridge Road/Museum Road and Kings Road/Museum Road (included in the study area at the request of Cllr Rob Wood). The latter junction has long been an area whereby the quantum of cycle casualties are relatively high and various improvement works have been carried out in an attempt to address this. It is now proposed to install cycle lane dividers in the hatched sections at the roundabout to improve lane discipline for vehicles and ensure cycles select the correct lane for the turn they wish to make at the junction; the proposal is not currently funded however. The Cambridge road roundabout has experienced a flurry of cycle casualties in the past 18-24months establishing a distinct "cluster". It is recommended that a feasibility study be undertaken to review the likely causes, and possible solutions, to this cluster of casualties.

Aside from the roundabouts detailed in the previous paragraph, the key roads within Old Portsmouth do not appear to have any "hotspots" in terms of where accidents are occurring, nor any correlation as to the demographics of those involved in the recorded casualties. The High Street and Broad Street accidents have largely involved vulnerable users (pedestrians/cyclists) whereas accidents at Pembroke Road and St George's Road have predominantly involved vehicles colliding with other vehicles or objects off of the carriageway. It should be noted that some of the pedestrian casualties at High Street & Broad Street have occurred close to known desire lines perhaps suggesting the need for more/improved crossing points. As a result, improved crossing facilities at known desire lines are being proposed as part of the recommendations within this report. The cause of incidents at St Georges Road and Pembroke Road are more difficult to determine with queuing vehicles, driver error/carelessness and speed all being possible causes.

The completion of the Shipwright's Way route has been a long-standing ambition of not only PCC, but also local interest groups and neighbourhood forums involved in this study. As the last remaining section required to complete the route, it is recommended that in conjunction with other recommended works, the remaining infrastructure for the Shipwright's Way be installed along an agreed route (as detailed in previous sections).

The Old Portsmouth area has experienced considerable disruption because of delays to Wightlink ferry services. This affects residents and businesses and can at times see the localised road network becoming near gridlocked. Wightlink have invested in a second parking level to increase their on-site capacity and allow faster loading/un-loading of ferries. Wightlink now have internal processes to reduce their impact upon the highway network in the event of delays however whilst the process works, there have been some concerns at how effectively Wightlink react to delays to prevent/lessen impact on local people. PCC have little control over how Wightlink operate, however there are some



changes that could be made to ease the impact and improve access for some residents/businesses. One potential option is represented within the appendices.

In addition to this, it is proposed to undertake trials of a queue warning system which will alert PCC's Traffic Management Centre (TMC) when queues begin to form on the approach to the IOW ferry terminal and Gunwharf Quays. Traffic monitoring equipment will be installed at 3 locations in St Georges Road and Park Road, which will relay data to PCC's cloud-based traffic data store where the data can be evaluated and appropriate queue alerts sent to the TMC. Permanent traffic monitoring cameras will be installed to visualise actual conditions on the road network to help identify the cause and scale of the problem. This will enable pro-active action to be taken, early engagement with stakeholders, (e.g. Wightlink & Gunwharf), to take place and information to be provided to the public via social media, variable-message signs etc. Results from the project will build a business case for moving the trial into a production system that could be utilised in other locations.

Aside from considering the issues identified during the initial workshop, the production of this report has highlighted that some of the previously held policies related to speed measurement and assessment, and the assessment of crossing provision are perhaps no longer suitable. Further, recent releases of new formal guidance from the DfT⁷ related to traffic engineering procedures provide a sensible opportunity to review these policies to ensure they best meet the needs of Portsmouth residents and their changing travel behaviours. Whilst a review of such policies is outside of the scope of this report, it is recommended that the more holistic approach developed within this study be now built upon to produce new "toolkits" for the measurement and assessment of speed, and assessment of future crossing locations.

⁷ Traffic Signs Manual (TSM) Chapter 6 Traffic Control (2019) & Physical Speed Measurement Rev 0 (2019)



7. Recommendations

- 1. Once agreed by stakeholders, this report is acknowledged formally by the member for Traffic & Transportation at a Cabinet meeting
- 2. Progress with feasibility work to develop schemes as recommended in this report (Full list is included at Appendix A) in conjunction with members of the working group
- 3. Progress proposals for a "School Street" for St Judes' school to address concerns around traffic congestion and Air Quality
- 4. This report provides a basis to support a bid to fund delivery of the identified interventions as detailed and in line with the schedule set out at Appendix A of the study report
- 5. Undertake a review of existing policy related to speed measurement and analysis, and pedestrian crossing assessment to reflect changes in National Policy
- 6. Review identified accident cluster at Cambridge Roundabout and take action if necessary as soon as practicable
- 7. Pursue funding opportunities to implement safety measures at the Kings' Road Roundabout



APPENDIX A

Full list of recommended schemes for further consideration;

Location	Intervention type	Implementation options*	Proposed implementation year
High Street/Peacock Lane	Crossing	Zebra Crossing or Kerb build outs or Pedestrian refuge	2021/22- 2022/23
High Street	Speed reduction	Horizontal/vertical deflection or Isolated interventions (crossing points, additional parking bays to form chicanes etc.) or 20MPH Zone	2021/22- 2022/23
Broad Street/ Feltham Row	Traffic calming/Crossing	Speed cushions or Kerb Build outs/pinch points or Zebra crossing	2021/22- 2022/23
Pembroke Road	Traffic Calming	Revised parking layout and/or Upgraded pedestrian refuge/crossing facilities	ТВС
St Nicholas Street/ Penny St	School street	Limit access to residents at school ingress/egress at St Nicholas Street/ Penny Street	2021/22
Armory Lane	Speed reduction	Reduce speed limit to 20mph	2021/22- 2022/23
Gunwharf Road	Crossing	PUFFIN crossing	2022/23

Recommended further work;

Policy review	Speed survey measurement & analysis
	Pedestrian crossing assessment
Speed Limit	Pembroke Road - review 20mph boundary
Low Traffic neighbourhood	Roads immediately North-East of Portsmouth Cathedral - investigate deterrent to rat-running/speeding vehicles through Lombard St/ Warblington St

^{*} Feasibility of some options will be dependent on funding available, should residents not agree on an intervention within funding available, scheme would be rolled over to a future year to bid for further funding or another scheme would be removed to fund shortfall



APPENDIX B

Traffic Speed Surveys

Note: Survey tables displayed are daily speed results due to the amount of data captured. Results by hour and direction of travel are available from PCC by request.



Location	High Stree	t Old Portsmou	th o/s No	o. 17	·	Speed d	ata outpu	uts		·					
Date	Time	Class	C1 / 1 - 15	C2 / 16 - 19	C3 / 20 - 24	C4 / 25 - 30	C5 / 31 - 36	C6 / 37 - 50	C7 / 51 - 55	C8 / 56 - 60	C9 / 61 - 150	Total	Average [MPH]	Excess. speed [V85 %] [MPH]
	00:00:00														
22/01/2018	00:00:00	(M)Bikes	98	43	18	3	0	0	0	0	0	162	14	2	19
	24:00:00	Cars	559	1233	998	210	21	1	0	0	0	3022	19	8	23
	24:00:00	Vans	17	51	33	2	0	0	0	0	0	103	18	2	21
	24:00:00	HGV/Bus	0	1	0	0	0	0	0	0	0	1	18	0	18
1		Total volume	674	1328	1049	215	21	1	0	0	0	3288	18	7	22
23/01/2018	00:00:00	(M)Bikes	753	540	190	25	1	0	0	0	0		15	2	19
	24:00:00	Cars	634	1314	1108	249	21	5	0	0	0		19	8	23
ס	24:00:00	Vans	13	49	36	3	1	0	0	0	0		19	4	22
ည်	24:00:00	HGV/Bus	0	0	0	0	0	0	0	0	0		0	0	0
24/01/2018		Total volume	1400	1903	1334	277	23	5	0	0	0		18	6	22
24/01/2018	00:00:00	(M)Bikes	1102	825	363	57	3	0	0	0	0	2350	16	3	20
46	24:00:00	Cars	428	903	776	222	12	1	0	0	0	2342	19	10	24
.	24:00:00	Vans	7	43	29	1	0	0	0	0	0	80	19	1	21
	24:00:00	HGV/Bus	1	0	0	0	0	0	0	0	0	1	15	0	15
3		Total volume	1538	1771	1168	280	15	1	0	0	0	4773	17	6	22
25/01/2018	00:00:00	(M)Bikes	359	240	111	25	1	0	0	0	0	736	15	4	21
	24:00:00	Cars	883	1741	1471	312	16	2	0	0	0	4425	19	7	23
	24:00:00	Vans	20	85	36	5	0	0	0	0	0	146	18	3	22
	24:00:00	HGV/Bus	1	0	1	0	0	0	0	0	0	2	19	0	24
4		Total volume	1263	2066	1619	342	17	2	0	0	0	5309	18	7	22
26/01/2018	00:00:00	(M)Bikes	339	166	60	22	1	0	0	0	0	588	14	4	19
	24:00:00	Cars	941	1899	1533	388	28	2	0	0	0	4791	19	9	23
	24:00:00	Vans	19	60	45	6	0	0	0	0	0	130	19	5	21
	24:00:00	HGV/Bus	1	5	2	0	0	0	0	0	0	8	18	0	21
5		Total volume	1300	2130	1640	416	29	2	0	0	0	5517	18	8	23
27/01/2018	00:00:00	(M)Bikes	426	454	266	38	4	2	0	0	0	1190	17	4	21
	24:00:00	Cars	404	1187	1137	350	29	3	0	0	0	3110	20	12	24



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	24:00:00	Vans	4	59	35	3	0	0	0	0	0	10)1	19	3	22
	24:00:00	HGV/Bus	1	0	0	0	0	0	0	0	0	1		7	0	7
6		Total volume	835	1700	1438	391	33	5	0	0	0	44	102	19	10	24
28/01/2018	00:00:00	(M)Bikes	124	38	33	10	0	0	0	0	0	20)5	14	5	22
	24:00:00	Cars	445	1415	1453	392	21	2	0	0	0	37	728	20	11	24
	24:00:00	Vans	23	47	18	2	0	0	0	0	0	90)	17	2	21
	24:00:00	HGV/Bus	1	1	1	0	0	0	0	0	0	3		16	0	20
7		Total volume	593	1501	1505	404	21	2	0	0	0	40	26	19	11	24
29/01/2018	00:00:00	(M)Bikes	208	88	38	4	2	0	0	0	0	34	10	14	2	19
	24:00:00	Cars	883	1884	1481	360	27	5	0	0	0	46	540	19	8	23
	24:00:00	Vans	27	85	49	6	0	0	0	0	0	16	57	18	4	21
	24:00:00	HGV/Bus	1	0	1	0	0	0	0	0	0	2		16	0	20
8		Total volume	1119	2057	1569	370	29	5	0	0	0	51	L 49	18	8	23
30/0 1/ 2018	00:00:00	(M)Bikes	286	158	76	10	1	0	0	0	0	53	31	14	2	20
ag	24:00:00	Cars	1024	1957	1492	381	25	1	0	0	0	48	380	19	8	23
Je	24:00:00	Vans	40	65	56	2	0	0	0	0	0	16	3	18	1	22
4	24:00:00	HGV/Bus	0	0	0	0	0	0	0	0	0	0		0	0	0
9 🔾		Total volume	1350	2180	1624	393	26	1	0	0	0	55	74	18	8	22
31/01/2018	00:00:00	(M)Bikes	413	203	62	10	1	0	0	0	0	68	39	14	2	19
	24:00:00	Cars	903	1792	1463	363	24	2	0	0	0	45	547	19	9	23
	24:00:00	Vans	24	72	51	3	0	0	0	0	0	15	50	18	2	21
	24:00:00	HGV/Bus	0	2	1	0	0	0	0	0	0	3		19	0	21
10		Total volume	1340	2069	1577	376	25	2	0	0	0	53	889	18	7	23
01/02/2018	00:00:00	(M)Bikes	169	54	37	14	1	0	0	0	0	27	75	14	5	21
	24:00:00	Cars	991	1951	1544	383	25	2	0	0	0	48	396	19	8	23
	24:00:00	Vans	32	88	41	5	0	0	0	0	0	16	66	18	3	21
	24:00:00	HGV/Bus	0	2	0	0	0	0	0	0	0	2		18	0	19
11		Total volume	1192	2095	1622	402	26	2	0	0	0	53	39	18	8	23
02/02/2018	00:00:00	(M)Bikes	172	73	29	8	1	0	0	0	0	28	33	14	3	19
	24:00:00	Cars	956	2063	1658	431	27	4	0	0	0	53	L39	19	9	23
	24:00:00	Vans	28	89	47	2	1	0	0	0	0	16	57	18	2	21
	24:00:00	HGV/Bus	0	1	0	0	0	0	0	0	0	1		17	0	17



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12		Total volume	1156	2226	1734	441	29	4	0	0	0	5590	19	8	23
03/02/2018	00:00:00	(M)Bikes	84	36	37	9	0	0	0	0	0	166	15	5	21
	24:00:00	Cars	506	1472	1468	449	35	7	0	0	0	3937	20	12	24
	24:00:00	Vans	15	71	45	3	0	0	0	0	0	134	19	2	22
	24:00:00	HGV/Bus	0	0	0	0	0	0	0	0	0	0	0	0	0
13		Total volume	605	1579	1550	461	35	7	0	0	0	4237	20	12	24
04/02/2018	00:00:00	(M)Bikes	111	55	37	12	1	0	0	0	0	216	15	6	21
	24:00:00	Cars	505	1404	1352	368	36	4	1	0	0	3670	20	11	24
	24:00:00	Vans	17	39	13	0	0	0	0	0	0	69	17	0	20
	24:00:00	HGV/Bus	1	0	2	0	0	0	0	0	0	3	20	0	24
14		Total volume	634	1498	1404	380	37	4	1	0	0	3958	19	11	24
05/02/2018	00:00:00	(M)Bikes	186	76	42	12	1	0	0	0	0	317	14	4	20
Р	24:00:00	Cars	871	1829	1478	375	26	3	0	0	0	4582	19	9	23
ag	24:00:00	Vans	21	63	42	11	0	0	0	0	0	137	19	8	22
Эe	24:00:00	HGV/Bus	0	0	0	0	0	0	0	0	0	0	0	0	0
15		Total volume	1078	1968	1562	398	27	3	0	0	0	5036	18	8	23
06/ 00 /2018	00:00:00	(M)Bikes	197	90	47	20	2	0	0	0	0	356	14	6	21
	24:00:00	Cars	963	2080	1687	405	23	3	0	0	0	5161	19	8	23
	24:00:00	Vans	21	74	40	3	0	0	0	0	0	138	18	2	21
	24:00:00	HGV/Bus	0	1	0	0	0	0	0	0	0	1	19	0	19
16		Total volume	1181	2245	1774	428	25	3	0	0	0	5656	18	8	23
07/02/2018	00:00:00	(M)Bikes	223	89	36	13	1	0	0	0	0	362	13	4	19
	24:00:00	Cars	911	1934	1552	399	37	2	0	0	0	4835	19	9	23
	24:00:00	Vans	25	58	43	7	0	0	0	0	0	133	19	5	23
	24:00:00	HGV/Bus	0	0	3	0	0	0	0	0	0	3	20	0	21
17		Total volume	1159	2081	1634	419	38	2	0	0	0	5333	18	9	23
08/02/2018	00:00:00	(M)Bikes	142	41	29	10	1	0	0	0	0	223	13	5	21
	24:00:00	Cars	802	1911	1650	437	36	6	0	0	0	4842	19	10	24
	24:00:00	Vans	37	87	43	5	0	0	0	0	0	172	18	3	21
	24:00:00	HGV/Bus	1	2	0	0	0	0	0	0	0	3	16	0	19
18		Total volume	982	2041	1722	452	37	6	0	0	0	5240	19	9	23
09/02/2018	00:00:00	(M)Bikes	111	51	40	14	2	0	0	0	0	218	16	7	22



	24:00:00	Cars	562	1844	1734	498	28	2	0	0	0	4668	20	11	24
	24:00:00	Vans	20	87	52	10	0	0	0	0	0	169	19	6	22
	24:00:00	HGV/Bus	1	0	0	0	0	0	0	0	0	1	13	0	13
19		Total volume	694	1982	1826	522	30	2	0	0	0	5056	19	11	24
10/02/2018	00:00:00	(M)Bikes	363	521	361	76	3	2	0	0	0	1326	18	6	22
	24:00:00	Cars	226	727	985	339	32	2	0	0	0	2311	21	16	25
	24:00:00	Vans	9	41	38	4	0	0	0	0	0	92	19	4	23
	24:00:00	HGV/Bus	0	0	0	0	0	0	0	0	0	0	0	0	0
20		Total volume	598	1289	1384	419	35	4	0	0	0	3729	20	12	24
11/02/2018	00:00:00	(M)Bikes	101	47	32	10	1	0	0	0	0	191	15	6	21
	24:00:00	Cars	385	1368	1422	380	19	2	0	0	0	3576	20	11	24
	24:00:00	Vans	22	42	27	4	0	0	0	0	0	95	18	4	22
	24:00:00	HGV/Bus	0	2	1	0	0	0	0	0	0	3	18	0	21
21 T		Total volume	508	1459	1482	394	20	2	0	0	0	3865	20	11	24
12/2018	00:00:00	(M)Bikes	176	77	48	12	1	0	0	0	0	314	14	4	21
Эe	24:00:00	Cars	467	1535	1518	518	51	5	0	0	0	4094	20	14	24
4	24:00:00	Vans	16	67	62	8	0	0	0	0	0	153	19	5	23
6	24:00:00	HGV/Bus	1	0	0	0	0	0	0	0	0	1	13	0	13
22		Total volume	660	1679	1628	538	52	5	0	0	0	4562	20	13	24
13/02/2018	00:00:00	(M)Bikes	274	286	166	24	1	0	0	0	0	751	16	3	21
	24:00:00	Cars	404	1374	1482	461	40	7	0	0	0	3768	20	13	24
	24:00:00	Vans	13	62	51	5	0	0	0	0	0	131	19	4	22
	24:00:00	HGV/Bus	0	0	0	0	0	0	0	0	0	0	0	0	0
23		Total volume	691	1722	1699	490	41	7	0	0	0	4650	19	12	24
14/02/2018	00:00:00	(M)Bikes	63	57	30	11	1	0	0	0	0	162	17	7	22
	24:00:00	Cars	92	454	559	220	21	2	0	0	0	1348	21	18	25
	24:00:00	Vans	4	29	23	3	0	0	0	0	0	59	19	5	22
	24:00:00	HGV/Bus	0	0	0	0	0	0	0	0	0	0	0	0	0
24		Total volume	159	540	612	234	22	2	0	0	0	1569	20	16	25
	Total														
/ 1	global	(M)Bikes	6480	4308	2188	449	31	4	0	0	0	13460	15	4	21



Statistics		Total volume	22709	43109	36156	9442	693	79	1	0	0	112189	19	9	23
/ 4	Total global	HGV/Bus	10	17	12	0	0	0	0	0	0	39	17	0	21
/3	Total global	Vans	474	1513	955	103	2	0	0	0	0	3047	18	3	22
/2	Total global	Cars	15745	37271	33001	8890	660	75	1	0	0	95643	19	10	24



Location	Broad Stre	eet Old Portsn	outh o/s	No.4		Speed o	lata outpu	ıts							
			C1 /	C2 / 16	C3 / 20	C4 / 25	C5 / 31	C6 / 37	C7 / 51	C8 / 56	C9 / 61		Average	Excess.	V85
Date	Time	Class	1 - 15	- 19	- 24	- 30	- 36	- 50	- 55	- 60	- 150	Total	[MPH]	speed [%]	[MPH]
	00:00:00														
22/01/2018	00:00:00	(M)Bikes	43	6	5	2	0	0	0	0	0	56	11	4	18
	24:00:00	Cars	67	170	414	361	82	10	0	0	0	1104	23	41	29
	24:00:00	Vans	9	16	44	42	5	0	0	0	0	116	23	41	28
	24:00:00	HGV/Bus	1	2	4	1	0	0	0	0	0	8	20	12	24
1		Total volume	120	194	467	406	87	10	0	0	0	1284	23	39	29
23/01/2018	00:00:00	(M)Bikes	53	30	38	31	3	0	0	0	0	155	18	22	26
	24:00:00	Cars	83	225	637	559	107	10	0	0	0	1621	24	42	29
	24:00:00	Vans	10	9	34	21	1	0	0	0	0	75	22	29	26
T	24:00:00	HGV/Bus	1	3	5	1	2	0	0	0	0	12	22	25	34
ag ² g		Total volume	147	267	714	612	113	10	0	0	0	1863	23	39	29
24/92/2018	00:00:00	(M)Bikes	44	15	18	15	1	3	0	0	0	96	18	20	25
5	24:00:00	Cars	72	175	660	566	120	23	0	0	0	1616	24	44	29
_	24:00:00	Vans	7	10	36	22	11	0	0	0	0	86	23	38	29
	24:00:00	HGV/Bus	0	2	4	6	0	0	0	0	0	12	23	50	27
3		Total volume	123	202	718	609	132	26	0	0	0	1810	24	42	29
25/01/2018	00:00:00	(M)Bikes	58	19	15	8	1	0	0	0	0	101	15	9	21
	24:00:00	Cars	130	230	752	564	116	15	0	0	0	1807	23	38	28
	24:00:00	Vans	12	16	72	69	10	3	0	0	0	182	24	45	29
	24:00:00	HGV/Bus	2	1	6	0	0	0	0	0	0	9	19	0	22
		Total													
4		volume	202	266	845	641	127	18	0	0	0	2099	23	37	28
26/01/2018	00:00:00	(M)Bikes	79	26	10	4	0	0	0	0	0	119	12	3	19
	24:00:00	Cars	163	281	787	582	117	7	0	0	0	1937	23	36	28
	24:00:00	Vans	20	28	101	69	18	1	0	0	0	237	23	37	29
	24:00:00	HGV/Bus	1	4	18	14	2	0	0	0	0	39	24	41	29



	I	Total	1	L	1	1	1	1	1	1	1		<u> </u>	1	
5		volume	263	339	916	669	137	8	0	0	0	2332	22	35	28
27/01/2018	00:00:00	(M)Bikes	52	24	23	18	2	0	0	0	0	119	16	17	25
	24:00:00	Cars	139	310	814	607	98	21	0	0	0	1989	23	37	28
	24:00:00	Vans	8	19	47	37	13	1	0	0	0	125	24	41	29
	24:00:00	HGV/Bus	0	1	2	1	0	0	0	0	0	4	22	25	25
		Total	100	25.4	000	663	112	22				2227	22	26	20
6	00.00.00	volume	199	354	886	663	113	22	0	0	0	2237	23	36	28
28/01/2018	00:00:00	(M)Bikes	73	12	7	2	0	0	0	0	0	94	11	2	17
	24:00:00	Cars	226	361	722	396	54	8	0	0	0	1767	21	26	27
	24:00:00	Vans	13	14	63	40	2	1	0	0	0	133	22	32	27
	24:00:00	HGV/Bus	4	13	12	0	0	0	0	0	0	29	18	0	21
, D		Total volume	316	400	804	438	56	9	o	0	0	2023	21	25	27
29 (63 /2018	00:00:00	(M)Bikes	38	11	5	2	0	0	0	0	0	56	12	4	19
Ð	24:00:00	Cars	103	160	617	458	110	10	0	0	0	1458	23	40	29
Ŋ	24:00:00	Vans	16	37	90	80	26	6	0	0	0	255	24	44	30
Ň	24:00:00	HGV/Bus	1	1	9	13	1	0	0	0	0	25	24	56	29
		Total													
8		volume	158	209	721	553	137	16	0	0	0	1794	23	39	29
30/01/2018	00:00:00	(M)Bikes	82	22	10	5	1	0	0	0	0	120	12	5	19
	24:00:00	Cars	149	320	767	567	94	15	0	0	0	1912	23	35	28
	24:00:00	Vans	10	19	52	72	7	3	0	0	0	163	24	50	29
	24:00:00	HGV/Bus	1	2	6	7	2	0	0	0	0	18	24	50	30
		Total													
9		volume	242	363	835	651	104	18	0	0	0	2213	22	35	28
31/01/2018	00:00:00	(M)Bikes	51	27	15	6	1	0	0	0	0	100	15	7	21
	24:00:00	Cars	114	274	766	603	105	18	0	0	0	1880	23	39	28
	24:00:00	Vans	20	27	89	88	23	1	0	0	0	248	24	45	30
	24:00:00	HGV/Bus	0	2	9	5	0	0	0	0	0	16	23	31	25
		Total													
10		volume	185	330	879	702	129	19	0	0	0	2244	23	38	28
01/02/2018	00:00:00	(M)Bikes	59	24	10	3	1	0	0	0	0	97	13	4	19



	24:00:00	Cars	105	224	669	557	74	10	0	0	0	1639	23	39	28
	24:00:00	Vans	17	49	115	110	17	0	0	0	0	308	23	41	28
	24:00:00	HGV/Bus	2	4	7	3	0	0	0	0	0	16	21	19	25
		Total													
11		volume	183	301	801	673	92	10	0	0	0	2060	23	38	28
02/02/2018	00:00:00	(M)Bikes	65	10	11	2	1	0	0	0	0	89	13	3	20
	24:00:00	Cars	149	289	649	561	107	11	1	0	0	1767	23	38	28
	24:00:00	Vans	14	36	104	89	19	1	0	0	0	263	23	41	29
	24:00:00	HGV/Bus	3	4	14	7	0	0	0	0	0	28	22	25	26
		Total													
12		volume	231	339	778	659	127	12	1	0	0	2147	22	37	28
03/02/2018	00:00:00	(M)Bikes	38	13	10	5	0	0	0	0	0	66	14	8	22
	24:00:00	Cars	156	301	715	572	100	15	0	0	0	1859	23	37	28
	24:00:00	Vans	9	21	56	58	22	3	1	0	0	170	25	49	31
o)	24:00:00	HGV/Bus	1	0	1	0	0	0	0	0	0	2	16	0	23
13 (D		Total													
		volume	204	335	782	635	122	18	1	0	0	2097	23	37	28
04/ 627 2018	00:00:00	(M)Bikes	56	15	5	1	1	0	0	0	0	78	13	3	18
ω	24:00:00	Cars	155	272	568	360	55	6	0	0	0	1416	22	30	27
	24:00:00	Vans	10	19	63	34	6	2	0	0	0	134	23	31	29
	24:00:00	HGV/Bus	4	13	3	1	0	0	0	0	0	21	18	5	20
		Total													
14		volume	225	319	639	396	62	8	0	0	0	1649	21	28	27
05/02/2018	00:00:00	(M)Bikes	44	7	4	1	1	0	0	0	0	57	12	4	19
	24:00:00	Cars	103	207	615	477	78	11	0	0	0	1491	23	38	28
	24:00:00	Vans	15	15	92	86	21	2	0	0	0	231	24	47	29
	24:00:00	HGV/Bus	3	3	10	6	1	0	0	0	0	23	22	30	27
		Total													
15		volume	165	232	721	570	101	13	0	0	0	1802	23	38	28
06/02/2018	00:00:00	(M)Bikes	48	15	10	1	0	0	0	0	0	74	13	1	19
	24:00:00	Cars	131	230	668	531	122	15	0	0	0	1697	23	39	29
	24:00:00	Vans	30	33	101	96	18	3	0	0	0	281	23	42	28
	24:00:00	HGV/Bus	1	1	5	9	0	0	0	0	0	16	24	56	28



	I	Total	1	I	1	1	1	1	1	I	1 1	1	<u> </u>	1	
16		volume	210	279	784	637	140	18	0	0	0	2068	23	38	29
07/02/2018	00:00:00	(M)Bikes	56	14	13	4	0	0	0	0	0	87	13	5	20
	24:00:00	Cars	127	227	719	589	117	19	0	0	0	1798	23	40	29
	24:00:00	Vans	9	30	71	78	21	1	0	0	0	210	24	48	30
	24:00:00	HGV/Bus	1	1	7	2	1	0	0	0	0	12	23	25	30
		Total								_					
17		volume	193	272	810	673	139	20	0	0	0	2107	23	39	29
08/02/2018	00:00:00	(M)Bikes	59	6	6	5	0	0	0	0	0	76	13	7	19
	24:00:00	Cars	110	226	624	575	118	20	1	0	0	1674	24	43	29
	24:00:00	Vans	14	32	94	119	21	5	0	0	0	285	24	51	30
	24:00:00	HGV/Bus	3	5	10	4	0	0	0	0	0	22	20	18	25
18 T		Total	100	260	724	702	120	25				2057	22	42	20
<u> </u>		volume	186	269	734	703	139	25	1	0	0	2057	23	42	29
09(63/2018	00:00:00	(M)Bikes	49	12	13	4	2	0	0	0	0	80	14	8	22
O .	24:00:00	Cars	115	240	696	569	115	13	0	0	0	1748	23	40	29
5 <u>4</u>	24:00:00	Vans	16	43	140	135	15	1	0	0	0	350	23	43	28
-4-	24:00:00	HGV/Bus	0	2	11	13	1	0	0	0	0	27	24	52	29
19		Total volume	180	297	860	721	133	14		0	0	2205	23	39	29
_	00:00:00		59	22	18	12	3	1	0	0	0	115			23
10/02/2018		(M)Bikes	+		+				+ -	-	+ -		16	14	23
	24:00:00	Cars	132	301	720	563	91	12	0	0	0	1819	23	37	
	24:00:00	Vans	6	14	42	47	6	1	0	0	0	116	24	47	28
	24:00:00	HGV/Bus Total	0	0	0	0	0	0	0	0	0	0	0	0	0
20		volume	197	337	780	622	100	14	0	0	0	2050	22	36	27
11/02/2018	00:00:00	(M)Bikes	72	15	8	4	0	0	0	0	0	99	12	4	18
	24:00:00	Cars	212	406	705	386	49	2	0	0	0	1760	21	25	26
	24:00:00	Vans	30	78	125	56	5	0	0	0	0	294	21	21	25
	24:00:00	HGV/Bus	6	20	5	0	0	0	0	0	0	31	18	0	20
		Total													
21		volume	320	519	843	446	54	2	0	0	0	2184	21	23	26
12/02/2018	00:00:00	(M)Bikes	87	11	13	1	0	0	0	0	0	112	12	1	19



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	24:00:00	Cars	221	320	648	475	88	13	1	0	0	1766	22	33	27
	24:00:00	Vans	24	51	129	112	19	1	0	0	0	336	23	39	28
	24:00:00	HGV/Bus	2	3	14	10	0	0	0	0	0	29	22	34	26
		Total													
22		volume	334	385	804	598	107	14	1	0	0	2243	22	32	27
13/02/2018	00:00:00	(M)Bikes	45	26	23	23	4	1	0	0	0	122	18	23	27
	24:00:00	Cars	112	257	690	538	136	12	0	0	0	1745	23	39	29
	24:00:00	Vans	17	44	85	78	18	4	0	0	0	246	23	41	29
	24:00:00	HGV/Bus	1	3	9	6	1	0	0	0	0	20	23	35	27
		Total													
23		volume	175	330	807	645	159	17	0	0	0	2133	23	38	29
	Total														
/1	global	(M)Bikes	1310	382	290	159	22	5	0	0	0	2168	14	9	22
-	Total														
/2 0	global	Cars	3074	6006	15622	12016	2253	296	3	0	0	39270	23	37	28
72 P 90 73 P	Total														
/3 0	global	Vans	336	660	1845	1638	324	40	1	0	0	4844	23	41	29
	Total														
/ 4 5 1	global	HGV/Bus	38	90	171	109	11	0	0	0	0	419	22	29	27
		Total	4750	7400	47000	42022	2540	244				46704		26	20
Statistics		volume	4758	7138	17928	13922	2610	341	4	0	0	46701	22	36	28



Location	Pembroke	Road Old Ports	mouth			Speed d	ata outpu	ıts							
			C1 / 1	C2 /	C3 /	C4 /	C5 /	C6 /	C7 /	C8 /	C9 /		Average	Excess.	V85
Date	Time	Class	- 15	16 - 19	20 - 24	25 - 30	31 - 35	36 - 50	51 - 55	56 - 60	61 - 80	Total	[MPH]	speed [%]	[MPH]
	00:00:00														
22/01/2018	00:00:00	(M)Bikes	24	23	17	19	12	5	0	0	0	100	22	5	31
	24:00:00	Cars	123	144	474	801	232	61	0	0	0	1835	25	3	31
	24:00:00	Vans	14	36	122	394	236	94	0	0	0	896	29	10	35
	24:00:00	HGV/Bus	4	15	40	45	13	0	0	0	0	117	24	0	30
1		Total volume	165	218	653	1259	493	160	0	0	0	2948	26	5	32
23/01/2018	00:00:00	(M)Bikes	58	33	39	32	17	12	0	0	0	191	21	6	31
	24:00:00	Cars	283	265	926	1718	521	157	1	0	0	3871	26	4	31
	24:00:00	Vans	18	34	123	433	253	99	0	0	0	960	29	10	35
T	24:00:00	HGV/Bus	7	17	64	76	33	2	0	0	0	199	25	1	31
2 0		Total volume	366	349	1152	2259	824	270	1	0	0	5221	26	5	32
24/20/2018	00:00:00	(M)Bikes	50	67	143	46	12	6	0	0	0	324	21	2	26
()	24:00:00	Cars	191	301	1036	1779	468	134	0	0	0	3909	26	3	31
56	24:00:00	Vans	11	27	108	335	217	79	0	0	0	777	29	10	35
•	24:00:00	HGV/Bus	2	24	60	57	18	2	0	0	0	163	25	1	30
3		Total volume	254	419	1347	2217	715	221	0	0	0	5173	26	4	32
25/01/2018	00:00:00	(M)Bikes	96	34	30	19	11	10	0	0	0	200	18	5	27
	24:00:00	Cars	405	271	998	1760	502	162	3	0	1	4102	25	4	31
	24:00:00	Vans	16	25	121	465	330	111	0	0	0	1068	29	10	35
	24:00:00	HGV/Bus	7	16	62	80	26	6	0	0	0	197	26	3	31
4		Total volume	524	346	1211	2324	869	289	3	0	1	5567	26	5	32
26/01/2018	00:00:00	(M)Bikes	88	41	44	60	47	25	0	0	0	305	22	8	34
	24:00:00	Cars	304	320	1136	1787	589	132	2	0	0	4270	25	3	31
	24:00:00	Vans	18	41	147	529	323	112	1	0	0	1171	29	10	34
	24:00:00	HGV/Bus	7	13	69	69	36	6	0	0	0	200	26	3	32
5		Total volume	417	415	1396	2445	995	275	3	0	0	5946	26	5	32
27/01/2018	00:00:00	(M)Bikes	48	26	12	8	7	4	0	0	0	105	18	4	27
	24:00:00	Cars	39	84	641	1887	849	293	4	1	0	3798	28	8	34
	24:00:00	Vans	4	5	33	111	90	26	0	0	0	269	30	10	35



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	24:00:00	HGV/Bus	0	12	42	57	23	12	0	0	0	146	27	8	33
6		Total volume	91	127	728	2063	969	335	4	1	0	4318	28	8	34
28/01/2018	00:00:00	(M)Bikes	52	12	10	9	4	2	О	0	0	89	16	2	27
	24:00:00	Cars	103	145	916	1475	539	184	2	1	1	3366	27	6	32
	24:00:00	Vans	5	14	42	148	118	50	1	0	0	378	30	13	35
	24:00:00	HGV/Bus	3	17	27	32	11	2	0	0	0	92	24	2	30
7		Total volume	163	188	995	1664	672	238	3	1	1	3925	27	6	32
29/01/2018	00:00:00	(M)Bikes	67	31	61	42	39	15	0	0	0	255	22	6	33
	24:00:00	Cars	347	342	1032	1702	441	113	0	0	0	3977	25	3	30
	24:00:00	Vans	34	50	132	523	347	115	1	0	0	1202	29	10	34
	24:00:00	HGV/Bus	5	14	61	67	42	5	0	0	0	194	26	3	32
8		Total volume	453	437	1286	2334	869	248	1	0	0	5628	26	4	32
30/01/2018	00:00:00	(M)Bikes	80	61	36	40	14	5	0	0	0	236	19	2	29
P	24:00:00	Cars	368	365	1222	1702	396	105	0	0	0	4158	24	3	30
aç	24:00:00	Vans	20	47	234	666	334	101	1	0	0	1403	28	7	33
ge	24:00:00	HGV/Bus	12	17	67	72	24	4	0	0	0	196	25	2	30
9 (J)		Total volume	480	490	1559	2480	768	215	1	0	0	5993	25	4	31
31/01/2018	00:00:00	(M)Bikes	67	32	31	46	20	6	0	0	0	202	20	3	30
	24:00:00	Cars	417	325	1086	1690	404	104	0	0	0	4026	24	3	30
	24:00:00	Vans	32	37	195	548	316	103	2	0	0	1233	29	9	34
	24:00:00	HGV/Bus	4	28	69	74	28	3	0	0	0	206	25	1	31
10		Total volume	520	422	1381	2358	768	216	2	0	0	5667	25	4	31
01/02/2018	00:00:00	(M)Bikes	117	40	32	23	9	3	0	0	0	224	16	1	25
	24:00:00	Cars	406	310	1180	1570	428	101	1	0	0	3996	24	3	30
	24:00:00	Vans	43	56	192	555	376	142	1	0	0	1365	29	10	34
	24:00:00	HGV/Bus	14	18	51	60	26	1	О	0	0	170	25	1	31
11		Total volume	580	424	1455	2208	839	247	2	0	0	5755	25	4	32
02/02/2018	00:00:00	(M)Bikes	89	34	31	29	18	3	0	0	0	204	18	1	29
	24:00:00	Cars	321	317	988	1681	496	160	0	0	2	3965	25	4	31
	24:00:00	Vans	25	59	206	704	417	150	0	0	0	1561	29	10	34
	24:00:00	HGV/Bus	6	15	60	84	27	10	0	0	0	202	26	5	32
12		Total volume	441	425	1285	2498	958	323	0	0	2	5932	26	5	32



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03/02/2018	00:00:00	(M)Bikes	22	6	7	17	9	4	0	0	0	65	22	6	34
	24:00:00	Cars	41	58	432	1720	855	285	2	2	0	3395	29	9	34
	24:00:00	Vans	3	5	32	144	124	61	2	0	0	371	31	17	36
	24:00:00	HGV/Bus	0	12	36	62	34	6	0	0	0	150	27	4	34
13		Total volume	66	81	507	1943	1022	356	4	2	0	3981	29	9	34
04/02/2018	00:00:00	(M)Bikes	105	24	17	21	5	0	0	0	0	172	16	0	25
	24:00:00	Cars	110	284	1141	1370	410	123	3	0	0	3441	25	4	31
	24:00:00	Vans	13	23	84	218	128	44	0	0	0	510	28	9	34
	24:00:00	HGV/Bus	4	14	19	26	14	1	0	0	0	78	25	1	32
14		Total volume	232	345	1261	1635	557	168	3	0	0	4201	25	4	31
05/02/2018	00:00:00	(M)Bikes	79	34	31	26	10	1	0	0	0	181	17	1	26
	24:00:00	Cars	282	304	810	1529	435	111	0	1	0	3472	25	3	31
P	24:00:00	Vans	25	35	179	662	390	118	2	0	0	1411	29	9	34
ag	24:00:00	HGV/Bus	8	26	57	74	33	5	0	0	0	203	25	2	31
15 O		Total volume	394	399	1077	2291	868	235	2	1	0	5267	26	5	32
06/02/2018	00:00:00	(M)Bikes	76	37	29	14	5	0	0	0	0	161	16	0	23
80.	24:00:00	Cars	460	324	1018	1444	331	68	1	0	0	3646	24	2	30
	24:00:00	Vans	37	83	226	742	434	137	2	0	0	1661	29	8	34
	24:00:00	HGV/Bus	14	29	59	68	34	5	0	0	0	209	25	2	32
16		Total volume	587	473	1332	2268	804	210	3	0	0	5677	25	4	32
07/02/2018	00:00:00	(M)Bikes	74	29	20	5	3	1	0	0	0	132	15	1	22
	24:00:00	Cars	418	285	1014	1422	436	124	1	1	0	3701	24	3	31
	24:00:00	Vans	27	63	192	582	359	130	1	0	0	1354	29	10	35
	24:00:00	HGV/Bus	12	21	43	82	21	2	0	0	0	181	25	1	30
17		Total volume	531	398	1269	2091	819	257	2	1	0	5368	25	5	32
08/02/2018	00:00:00	(M)Bikes	88	28	25	34	16	8	0	0	0	199	19	4	30
	24:00:00	Cars	362	225	807	1744	589	198	4	0	0	3929	26	5	32
	24:00:00	Vans	26	46	139	451	281	136	2	0	0	1081	29	13	35
	24:00:00	HGV/Bus	19	19	67	78	32	3	0	0	0	218	25	1	31
18		Total volume	495	318	1038	2307	918	345	6	0	0	5427	26	6	33
09/02/2018	00:00:00	(M)Bikes	89	41	21	47	32	18	0	0	0	248	21	7	32
	24:00:00	Cars	258	290	926	1670	553	147	1	1	2	3848	26	4	32



Statistics		Total volume	7673	7453	25678	49022	19171	6239	55	8	8	115307	26	5	32
/ 4	global	HGV/Bus	141	398	1198	1434	628	114	0	0	0	3913	25	3	32
	Total									_					
/ 3	global	Vans	414	794	2964	9719	5993	2205	18	1	0	22108	29	10	34
/ 2	global Total	Cars	5515	5453	20649	37164	12214	3782	37	7	8	84829	26	5	32
	Total														
/ 1	Total global	(M)Bikes	1603	808	867	705	336	138	0	0	0	4457	19	3	29
23		Total volume	101	210	906	2474	1134	426	6	0	0	5257	28	8	34
	24:00:00	HGV/Bus	1	18	42	70	33	7	0	0	0	171	27	4	32
	24:00:00	Vans	8	19	77	297	181	96	2	0	0	680	30	14	35
<u> </u>	24:00:00	Cars	47	111	590	1974	892	316	4	0	0	3934	29	8	34
13/02/2018	00:00:00	(M)Bikes	45	62	197	133	28	7	0	0	0	472	23	1	28
22 0		Total volume	164	151	990	2224	915	324	3	0	0	4771	27	7	33
תט	24:00:00	HGV/Bus	3	11	61	49	36	10	0	0	0	170	27	6	34
ge	24:00:00	Vans	12	14	85	289	161	72	0	0	0	633	29	11	35
<u>. 0</u>	24:00:00	Cars	98	112	833	1873	714	239	3	0	0	3872	27	6	33
12/02/2018	00:00:00	(M)Bikes	51	14	11	13	4	3	0	0	0	96	17	3	29
21	21.00.00	Total volume	149	220	975	1607	605	217	3	1	1	3778	27	6	32
	24:00:00	HGV/Bus	2	15	27	28	13	3	0	0	0	88	25	3	32
	24:00:00	Vans	5	13	83	301	192	66	0	1	0	661	29	10	35
11,02,2010	24:00:00	Cars	85	168	859	1264	394	148	3	0	1	2922	26	5	32
11/02/2018	00:00:00	(M)Bikes	57	24	6	14	6	0	0	0	0	107	16	0	25
20	24.00.00	Total volume	130	197	699	1776	846	360	2	0	1	4011	28	9	34
	24:00:00	HGV/Bus	1	12	53	47	26	5	0	0	0	144	26	3	32
	24:00:00	Vans	1	7	45	119	72	38	0	0	0	282	30	13	35
10/02/2010	24:00:00	Cars	47	103	584	1602	740	317	2	0	1	3396	29	9	34
10/02/2018	00:00:00	(M)Bikes	81	75	17	8	8	0	0	0	0	189	17	0	21
19	24.00.00	Total volume	370	401	1176	2297	944	304	1	1	2	5496	26	6	32
	24:00:00	Vans HGV/Bus	17 6	55 15	167 62	503 77	45	14	0	0	0	219	27	6	35



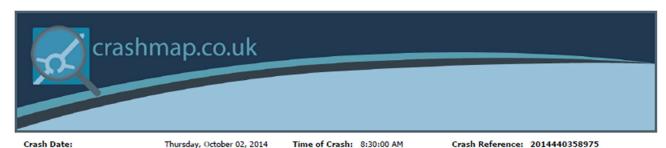


APPENDIX C

Casualty data



High Street Incident 1



Crash Date: Thursday, October 02, 2014 Time of Crash: 8:30:00 AM Crash Reference: 2014440358975

Highest Injury Severity: Slight Road Number: A3 Number of Casualties: 1

Highway Authority: Portsmouth Number of Vehicles: 2
Ocal Authority: Portsmouth OS Grid Reference: 46

Weather Description: Fine without high winds

Road Surface Description: Dry
Speed Limit: 30

Light Conditions: Daylight: regardless of presence of streetlights

Carriageway Hazards: None

Junction Detail: Roundabout

Junction Pedestrian Crossing: No physical crossing facility within 50 metres

Road Type: Roundabout

Junction Control: Give way or uncontrolled



For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Vehicle Ref			Driver Gender			First Point of Impact		Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Pedal cycle	-1	Male		Vehicle proceeding normally along the carriageway, not on a bend	Front	Commuting to/from work		None
1	Gar (excluding private lire)	-1	Unknow n	Unknown	Vehicle is in the act of turning left	Offside	Other	None	None

Casualties

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

For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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High street incident 2





Crash Reference: 2014440414929 Crash Date: Tuesday, November 18, 2014 Time of Crash: 7:20:00 PM

Road Number: U0 Number of Casualties: 1 **Highest Injury Severity:** Serious **Highway Authority:** Portsmouth Number of Vehicles: 1

Local Authority: Portsmouth

Weather Description: Fine without high winds

ROSurface Description:
Speed Limit:
Light Conditions: Dry 30

Darkness: street lights present and lit

Carriageway Hazards:

Junction Detail: T or staggered junction

Junction Pedestrian Crossing: No physical crossing facility within 50 metres

Road Type: Single carriageway Give way or uncontrolled **Junction Control:**



For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Vehicle Ref	Vehicle Type		Driver Gender		A CONTRACTOR OF THE PROPERTY O	First Point of Impact		Hit Object - On Carriageway	
	Car (excluding private hire)	8	Male	56 - 65	Vehicle is in the act of turning right	Front	Taking pupil to/from school	None	None

Casualties

Vehic	e Re	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
9 G		1 1	Serious	Pedestrian	Male	36 - 45	In carriageway, crossing elsewhere	Crossing from driver's nearside - masked by parked or stationary vehicle
Œ								
Ö	ר ר							

For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Broad Street incident 1





Crash Date: Friday, May 30, 2014 Time of Crash: 8:49:00 AM Crash Reference: 2014440189381

Highest Injury Severity: Slight Road Number: A3 Number of Casualties: 1
Highway Authority: Portsmouth Number of Vehicles: 1

Local Authority: Portsmouth

Weather Description: Fine without high winds

Roo Surface Description: Dry
Speed Limit: 30
Ligonomitions: Dayl

Lights onditions: Daylight: regardless of presence of streetlights

Carriageway Hazards: None

Junction Detail: Not at or within 20 metres of junction

Junction Pedestrian Crossing: No physical crossing facility within 50 metres

Road Type: Single carriageway

Junction Control: Not Applicable



For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Vehicle Ref	The second secon		Driver Gender		First Point of Impact		Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Van or goods vehicle 3.5 tonnes mgw and under	-1	Male	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	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	1	Slight	Pedestrian	Male	66 - 75	In carriageway, crossing elsewhere	Crossing from driver's offside

 $For more information about the data please visit: {\it www.crashmap.co.uk/home/about the data} and {\it www.crashmap.co.uk/home/definitions} and {\it www.crashmap.co.uk/home/about the data} and {\it www.crashmap.co.uk/h$

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Broad street incident 2



Crash Date: Saturday, April 18, 2015 Time of Crash: 2:52:00 PM Crash Reference: 2015440130076

Road Number: A3 Number of Casualties: 1 **Highest Injury Severity:** Serious Highway Authority: Portsmouth Number of Vehicles: 1

Weather Description: Fine without high winds

Road Surface Description: Dry Spec Limit: 20

Light Conditions: Daylight: regardless of presence of streetlights

Portsmouth

Carriageway Hazards:

Junction Detail: T or staggered junction

No physical crossing facility within 50 metres **Junction Pedestrian Crossing:**

Road Type: Single carriageway **Junction Control:** Give way or uncontrolled



For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Vehicle Ref	Vehicle Type		Driver Gender		First Point of Impact		Hit Object - On Carriageway	Hit Object - Off Carriageway
	Van or goods vehicle 3.5 tonnes mgw and under	5	Male	Vehicle proceeding normally along the carriageway, on a left hand bend	Front	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
a B	1	Serious	Pedestrian	Female	11 - 15		Crossing from driver's nearside - masked by parked or stationary vehicle
9							
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For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Pembroke Road incident 1





Crash Date: Saturday, December 28, 2013 Time of Crash: 9:37:00 AM Crash Reference: 2013440484114

Highest Injury Severity: Slight Road Number: U0 Number of Casualties: 1
Highway Authority: Portsmouth Number of Vehicles: 1

Local Authority: Portsmouth OS Grid Reference: 463325 99308

Weather Description: Fine with high winds

R Surface Description: Dry
Speed Limit: 30

Light onditions: Daylight: regardless of presence of streetlights

Carriageway Hazards: None

Junction Detail: Crossroads

Junction Pedestrian Crossing: Pelican, puffin, toucan or similar non-junction

pedestrian light crossing

Road Type: Single carriageway

Junction Control: Give way or uncontrolled



For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Vehicle Ref	Vehicle Type		Driver Gender				Hit Object - On Carriageway	
	1 Car (excluding private hire)	5	Female	 Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	Lamp post

Casualties

٧	ehicle F	lef	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
	V	1	1	Slight	Driver or rider	Female	26 - 35	Unknown or other	Unknown or other

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For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Pembroke road incident 2





Crash Date: Thursday, May 21, 2015 Time of Crash: 5:45:00 PM Crash Reference: 2015440175295

Highest Injury Severity: Slight Road Number: U0 Number of Casualties: 1
Highway Authority: Portsmouth Number of Vehicles: 2

Local Authority: Portsmouth

Weather Description: Fine without high winds

ROSurface Description: Dry

Speed Limit: 30

Light conditions: Daylight: regardless of presence of streetlights

Carriageway Hazards: None

Junction Detail: T or staggered junction

Junction Pedestrian Crossing: No physical crossing facility within 50 metres

Road Type: Single carriageway

Junction Control: Give way or uncontrolled



For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Vehicle Ref	Vehicle Type		Driver Gender			First Point of Impact		Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Pedal cycle	-1	Female		Vehicle proceeding normally along the carriageway, on a left hand bend	Offside	Other	None	None
2	Car (excluding private hire)	-1	Unknow n	Unknown	Vehicle is in the act of turning right	Front	Other	None	None

Casualties

Vel	irde R	lef	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
	$\overline{\mathbf{Q}}$	1	1	Slight	Driver or rider	Female	26 - 35	Unknown or other	Unknown or other
	\Box								

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For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Pembroke road incident 3





Crash Date: Wednesday, November 30, Time of Crash: 3:30:00 PM Crash Reference: 2016440451671 2016 Road Number: U0 Number of Casualties: 1 **Highest Injury Severity:** Slight **Highway Authority:** Portsmouth Number of Vehicles: 2 Local Authority: OS Grid Reference: 463373 99266 Portsmouth City Weather Description: Fine without high winds

Speed Limit: 30

Light Conditions: Daylight: regardless of presence of streetlights

Carriageway Hazards: None

Junction Detail: Not at or within 20 metres of junction

Junction Pedestrian Crossing: No physical crossing facility within 50 metres

Road Type: Single carriageway

Junction Control: Not Applicable



For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Vehicle Ref			Driver Gender			First Point of Impact		Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	12	Male	26 - 35	Vehicle is passing another moving vehicle on its offside	Front	Other	None	Wall or fence
2	Car (excluding private hire)	9	Female	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Back	Pupil riding to/from school	None	None

Casualties

Vehicle	Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
)e	2	1	Slight	Driver or rider	Female	36 - 45	Unknown or other	Unknown or other

3

For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Pembroke road incident 4





2017 data is provisional and is subject to change

Time of Crash: 2:36:00 PM Crash Reference: 2017440025076

Slight Road Number: U0 Number of Casualties: 1

Portsmouth Number of Vehicles: 1

Local Authority: Portsmouth City OS Grid Reference: 463324 99302

Friday, January 20, 2017

Weather Description: Fine without high winds

Rourface Description: Dry Speed Limit: 30 Light onditions: Day

Crash Date:

Highest Injury Severity:

Highway Authority:

Lights onditions: Daylight: regardless of presence of streetlights

Carriageway Hazards: None

Junction Detail: Crossroads

Junction Pedestrian Crossing: No physical crossing facility within 50 metres

Road Type: Single carriageway

Junction Control: Give way or uncontrolled



For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Vehicle Ref	Vehicle Type		Driver Gender		First Point of Impact		Hit Object - On Carriageway	Hit Object - Off Carriageway
	Car (excluding private hire)	-1	Male	Vehicle proceeding normally along the carriageway, not on a bend	Unknown	Journey as part of work	None	Wall or fence

Casualties

Vehicle Ref Casualty Re	f Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
U 1	1 Slight	Driver or rider	Male	65-74	Unknown or other	Unknown or other

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For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Pembroke road incident 5





2017 data is provisional and is subject to change

Tuesday, February 07, 2017 Time of Crash: 1:30:00 PM

Road Number: U0 Number of Casualties: 4 **Highest Injury Severity:** Slight **Highway Authority:** Portsmouth Number of Vehicles: 2

Local Authority: Portsmouth City

Weather Description: Fine without high winds

Speed Limit: Wet or Damp

30

Crash Date:

Light Conditions: Daylight: regardless of presence of streetlights

Carriageway Hazards:

Junction Detail: Not at or within 20 metres of junction

Junction Pedestrian Crossing: No physical crossing facility within 50 metres

Road Type: Single carriageway

Unknown **Junction Control:**

Crash Reference: 2017440048851

OS Grid Reference: 463510 99192



For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Vehicle Ref	Vehicle Type		Driver Gender			First Point of Impact			Hit Object - Off Carriageway
1	Car (excluding private hire)	-1	Female	16-24	Vehicle proceeding normally along the carriageway, not on a bend	Unknown	Other	Parked vehicle	None
2	Car (excluding private hire)	-1	Male	65-74	Vehicle is parked in the carriageway	Unknown	Journey as part of work	None	None

Casyalties

Velucie I	Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
9	1	1	Slight	Driver or rider	Female	16-24	Unknown or other	Unknown or other
e 7	1	2	Slight	Vehicle or pillion passenger	Female	16-24	Unknown or other	Unknown or other
9	1	3	Slight	Vehicle or pillion passenger	Female	16-24	Unknown or other	Unknown or other
	2	4	Slight	Vehicle or pillion passenger	Female	35-44	Unknown or other	Unknown or other

For more information about the data please visit: $www.crashmap.co.uk/home/about the data please visit: \\ www.crashmap.co.uk/home/about the data please visit: \\ www.crashmap.c$

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St George's road incident 1





Crash Date: Wednesday, October 30, 2013 Time of Crash: 5:03:00 PM Crash Reference: 2013440411306

 Highest Injury Severity:
 Serious
 Road Number:
 B2154
 Number of Casualties:
 1

 Highway Authority:
 Portsmouth
 Number of Vehicles:
 2

Local Authority: Portsmouth OS Grid Reference: 463404 99756

Weather Description: Fine without high winds

ROSurface Description: Dry
Speed Limit: 30
Light Sonditions: Day

Light Conditions: Daylight: regardless of presence of streetlights

Carriageway Hazards: None

Junction Detail: T or staggered junction

Junction Pedestrian Crossing: No physical crossing facility within 50 metres

Road Type: Single carriageway

Junction Control: Give way or uncontrolled



For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Vehicle Ref	Vehicle Type		Driver Gender			First Point of Impact			Hit Object - Off Carriageway
1	Car (excluding private hire)	9	Male	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
2	Car (excluding private hire)	4	Male	26 - 35	Vehicle is in the act of turning right	Offside	Other	None	None

Casualties

Vehing: Ref Casualty Ref Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2 1 Serious	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other

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For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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St George's road incident 2





Crash Date: Thursday, March 05, 2015 Time of Crash: 5:32:00 PM Crash Reference: 2015440076315 **Highest Injury Severity:** Slight Road Number: B2154 Number of Casualties: 1 Number of Vehicles: 2 **Highway Authority:** Portsmouth Local Authority: Portsmouth OS Grid Reference: 463476 99680 Weather Description: Fine without high winds

Rosurface Description:
Speed Limit:
Light Sonditions: Dry 30

Daylight: regardless of presence of streetlights

Carriageway Hazards:

Junction Detail: T or staggered junction

Junction Pedestrian Crossing: Zebra crossing Road Type: Single carriageway **Junction Control:** Give way or uncontrolled



For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Vehicle Ref	Vehicle Type		Driver Gender			First Point of Impact		Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	11	Male	46 - 55	Vehicle is performing a U turn	Front	Other	None	None
2	Car (excluding private hire)	1	Male	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Did not impact	Other	None	None

Casualties

Vehicle Ref Casualty Ref Inj	jury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
Q 2 1 Slig	ight I	Driver or rider	Male	36 - 45	Unknown or other	Unknown or other

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For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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St George's road incident 3





Crash Date: Thursday, April 23, 2015 Time of Crash: 7:45:00 AM Crash Reference: 2015440135969

Highest Injury Severity: Slight Road Number: B2154 Number of Casualties: 1

Highway Authority: Portsmouth Number of Vehicles: 2

Local Authority: Portsmouth OS Grid Reference: 463448 99714

Weather Description: Fine without high winds

ROSurface Description: Dry
Speed Limit: 30
Light Conditions: Day

Light Conditions: Daylight: regardless of presence of streetlights

Carriageway Hazards: None

Junction Detail: Using private drive or entrance

 Junction Pedestrian Crossing:
 Zebra crossing

 Road Type:
 Single carriageway

 Junction Control:
 Give way or uncontrolled



For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Vehicle Ref			Driver Gender					Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	9	Female	46 - 55	Vehicle is in the act of turning right		Journey as part of work	None	None
2	Motorcycle over 500cc	28	Male		Vehicle is passing another moving vehicle on its offside		Journey as part of work	None	None

Casualties

Vehicle	Re	ef (Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
9		2	1	Slight	Driver or rider	Male	46 - 55	Unknown or other	Unknown or other
O									

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For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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St George's road incident 4





Crash Date: Wednesday, October 28, 2015 Time of Crash: 7:56:00 PM Crash Reference: 2015440375175

Number of Casualties: 1 **Highest Injury Severity:** Slight Road Number: B2154 Number of Vehicles: 3 **Highway Authority:** Portsmouth

Local Authority: Portsmouth

Weather Description: Fine without high winds

RUSurface Description:
Speed Limit:
Light Sonditions: Dry 30

Darkness: street lights present and lit

Carriageway Hazards:

Junction Detail: Not at or within 20 metres of junction

Junction Pedestrian Crossing: Zebra crossing Road Type: Single carriageway Not Applicable **Junction Control:**



For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Vehicle Ref	Vehicle Type		Driver Gender			First Point of Impact		Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	11	Male	36 - 45	Vehicle is slowing down or stopping	Back	Other	None	None
2	Car (excluding private hire)	9	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Did not impact	Other	None	None
	Car (excluding private hire)	2	Female	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None

Castalties

Vehi le Ref Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
∞ ² 1	Slight	Vehicle or pillion passenger	Female	26 - 35	Unknown or other	Unknown or other

For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

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Contributory Factors Report Summary - Kings Rd Rbt Apr 2013 to Apr 2018

Accidents Found Date Range: 30/08/2013 - 11/11/2017 Grid Coordinate Range: 463800,99458-463869,99502 Accident Date BETWEEN '01-May-2013' AND '30-Apr-2018'

Accident Severity

	2013	2014	2015	2016	2017	Total
Slight	3	3	4	1	4	15
Total	3	3	4	1	4	15

Casualty Severity

	2013	2014	2015	2016	2017	Total
Slight	3	3	4	1	5	16
Total	3	3	4	1	5	16

Casualty KSI



Kings Rd Rbt Apr 2013 to Apr 2018

Accident Date BETWEEN '01-May-2013' AND '30-Apr-2018'

Contributory Factors Report

Accident Date BETWEEN '01-May-2013' AND '30-Apr-2018'



Accident Reference:130328255

Slight

A288 KINGS TERRACE AT JUNCTION WITH B2154 KINGS ROAD, PORTSMOUTH, HAMPSHIRE Accident 1 of 15

Grid Coords 463828/99468

Weather Fine without high winds

Surface Dry

Friday 30/08/2013 11:35

Participant Confidence Did a police 405 Failed to look properly (Driver/Rider - Error) Vehicle 001 Very likely

406 Failed to judge other person's path/speed (Driver/Rider - Error)

Vehicle 001 Very likely

S to N

Participant Confidence

Daylight Daylight

officer attend? Yes

Accident Description

VEH 1 (TAXI) TRAVELLING N ALONG A288 KINGS TERRACE ENTERED RBT COLLIDING WITH VEH 2 (P/CYCLE) TRAVELLING W ALONG B2154 KINGS ROAD AND AROUND RBT.

Vehicles

1 Taxi

Starting Going ahead other No skid No skid Negative Male Age 70 2 Pedal Cycle Not applicable E to W Female Age 16

Casualties

Slight Vehicle no.2

Accident Reference:130427279 Slight A288 KINGS TERRACE AT JUNCTION WITH B2154 KINGS ROAD, $\;$ Accident 2 of 15 PORTSMOUTH, HAMPSHIRE

Tuesday 12/11/2013 08:04 Grid Coords 463825/99469 Daylight Daylight

Surface Wet/Damp Weather Raining without high winds

Contributory Factors

Did a police officer attend? Vehicle 001 Very likely 405 Failed to look properly (Driver/Rider - Error)

707 Rain, sleet, snow or fog (Driver/Rider - Vision Affected)
708 Spray from other vehicles (Driver/Rider - Vision Affected)
507 Rider wearing dark clothing (Driver/Rider - Impairment) Vehicle 001 Possible Vehicle 001 Possible Vehicle 002 Possible

Accident Description

VEH 1 (CAR) TRAVELLING N ALONG A288 KINGS TERRACE, ENTERS RBT TO TAKE 2ND EXIT FAILING TO SEE VEH 2 (P/CYCLE) ON RBT TRAVELLING W FROM B2154 KINGS ROAD AND COLLIDES, KNOCKING RIDER OFF.

Vehicles

1 Car Going ahead other No skid Negative N to N Female Age 29 2 Pedal Cycle Not applicable E to W No skid Going ahead other Male Age 38

Casualties

1 Driver or Rider Slight Vehicle no.2 Male 38

Contributory Factors Report 05-September-2018

Accident Date BETWEEN '01-May-2013' AND '30-Apr-2018'



Accident Reference:130439880

Slight

B2154 MUSEUM ROAD AT JUNCTION WITH LANDPORT TERRACE,

Accident 3 of 15

Thursday 21/11/2013 20:30

Grid Coords 463847/99480

Daylight Dark/lights lit

Weather Fine without high winds

Participant Confidence Did a police officer attend?

Contributory Factors

Surface Dry

405 Failed to look properly (Driver/Rider - Error)

603 Nervous/Uncertain (Driver/Rider - Behaviour) 507 Rider wearing dark clothing (Driver/Rider - Impairment) 506 Not displaying lights at night or poor visibility

Vehicle 002 Possible Vehicle 002 Possible Vehicle 001 Very likely Vehicle 001 Very likely

Accident Description

VEH 1 (P/CYCLE) TRAVELLING E ALONG B2154 MUSEUM ROAD CROSSED THE RBT AT LANDPORT TERRACE. VEH 2 (CAR) TRAVELLING S ALONG LANDPORT TERRACE ENTERED THE RBT INTO THE PATH OF VEH 1, CAUSING VEH 1 TO COLLIDE WITH THE OFFSIDE OF VEH 2.

Vehicles

1 Pedal Cycle 2 Car

Going ahead other Starting

No skid No skid Not applicable W to E Not contacted N to S

Male Age 19

Accident 4 of 15

Not traced Age -1

1 Driver or Rider

Accident Reference:140179065

Thursday 22/05/2014 00:30

Slight Vehicle no.1

Slight

PORTSMOUTH, HAMPSHIRE Grid Coords 463841/99502

Male 19

B2154 MUSEUM ROAD AT JUNCTION WITH LANDPORT TERRACE,

Daylight Dark/lights lit

Surface Wet/Damp

Weather Raining without high winds

Contributory Factors

602 Careless/Reckless (Driver/Rider - Behaviour) 501 Impaired by alcohol (Driver/Rider - Impairment) 502 Impaired by drugs (Driver/Rider - Impairment)

Participant Confidence

Vehicle 002 Very likely Vehicle 002 Very likely Vehicle 002 Possible

Did a police officer attend?
No - reported
'over the

Accident Description

VEH 1 (CAR) TRAVELLING N ALONG LANDPORT TERRACE ENTERS FROM RBT DRIFTING OVER THE CENTRAL LINE AND COLLIDES WITH VEH 2 (CAR) TRAVELLING S ALONG LANDPORT TERRACE APPROACHING RBT.

Vehicles

1 Car 2 Car Stopping

No skid Going ahead other No skid

Not contacted S to N

Male Age 23 Not traced Age -1

Casualties

Slight Vehicle no.1 1 Driver or Rider

Male 23

Contributory Factors Report

Accident Date BETWEEN '01-May-2013' AND '30-Apr-2018'



Accident Reference:140248010

Slight

KING'S TERRACE AT JUNCTION WITH KINGS ROAD, PORTSMOUTH, Accident $5\ \mathrm{of}\ 15$

Daylight Daylight

Grid Coords 463827/99465

Saturday 12/07/2014 14:31 Surface Dry

Weather Fine without high winds

Contributory Factors

Participant Confidence Vehicle 001 Very likely

Participant Confidence

Did a police officer attend? Yes

Did a police officer attend?

Accident Description

VEH 1 (CAR) TRAVELLING NA LONG KINGS TERRACE ENTERED THE RBT AT KINGS ROAD AND COLLIDED WITH THE NEARSIDE OF VEH 2 (P/CYCLE) TRAVELLING W ACROSS THE RBT.

405 Failed to look properly (Driver/Rider - Error)

Vehicles

Going ahead other Going ahead other 1 Car 2 Pedal Cycle

No skid No skid

Female Age 44 Male Age 56 Negative S to N Not applicable E to W

Daylight Dark/lights lit

Casualties

Slight Vehicle no.2 Male 56

Accident Reference:140430585 Slight B2154 MUSEUM ROAD AT JUNCTION WITH LANDPORT TERRACE, Accident 6 of 15

Tuesday 02/12/2014 07:09 Grid Coords 463843/99480

Surface Wet/Damp Weather Raining without high winds

Contributory Factors

302 Disobeyed give way or stop sign markings (Driver/Rider - Injudicious)

401 Junction overshoot (Driver/Rider - Error) 405 Failed to look properly (Driver/Rider - Error)

Vehicle 001 Very likely Vehicle 001 Very likely Vehicle 001 Very likely

Accident Description

VEH 1 (CAR) TRAVELLING S ALONG LANDPORT TERRACE ENTERED THE RBT AT B2154 MUSEUM ROAD AND COLLIDED WITH THE NEARSIDE OF VEH 2 (P/CYCLE) TRAVELLING E ACROSS THE RBT.

Vehicles

N to S Male Age 49 Male Age 39 1 Car Starting No skid Negative 2 Pedal Cycle Going ahead other Not applicable W to E No skid

Casualties

1 Driver or Rider Slight Vehicle no.2 Male 39

Contributory Factors Report 05-September-2018

Accident Date BETWEEN '01-May-2013' AND '30-Apr-2018'



Accident Reference:150117785

Slight

B2154 MUSEUM ROAD AT JUNCTION WITH LANDPORT TERRACE,

Accident 7 of 15

Tuesday 07/04/2015 20:35

Surface Dry

Grid Coords 463838/99484

Weather Fine without high winds

Daylight Dark/lights lit

Did a police officer attend?

Contributory Factors

405 Failed to look properly (Driver/Rider - Error)

Vehicle 001 Very likely

Participant Confidence

No - reported 'over the counter'

Accident Description

VEH 1 (CAR) TRAVELLING SE ALONG B2154 MUSEUM ROAD AROUND RBT OVERTAKES VEH 2 (P/CYCLE) TRAVELLING IN THE SAME DIRECTION, CLIPPING THE HANDLEBARS, CAUSING THE RIDER TO FALL OFF.

Vehicles

1 Car Going ahead other No skid

Male 24

Not contacted NW to SE

Not traced Age -1

2 Pedal Cycle Going ahead other

No skid

Not applicable NW to SE

Male Age 24

1 Driver or Rider Accident Reference:150329738

Slight Vehicle no.2

Slight

A288 KINGS TERRACE AT JUNCTION WITH B2154 KINGS ROAD, $\;\;$ Accident 8 of 15 PORTSMOUTH, HAMPSHIRE

Daylight Daylight

Wednesday 23/09/2015 07:23 Surface Dry

Grid Coords 463827/99467

Weather Fine without high winds

Contributory Factors

405 Failed to look properly (Driver/Rider - Error)

406 Failed to judge other person's path/speed (Driver/Rider - Error) 706 Dazzling sun (Driver/Rider - Vision Affected)

Participant Confidence Vehicle 001 Very likely Did a police officer attend?

Vehicle 001 Possible Vehicle 001 Possible

Accident Description

VEH 1 (CAR) TRAVELLING N ALONG A288 KINGS TERRACE ENTERED RBT AND COLLIDED WITH VEH 2 (P/CYCLE) TRAVELLING NE ALONG B2154 KINGS ROAD AND AROUND RBT.

Vehicles

2 Pedal Cycle

Starting Going ahead other

No skid No skid

Negative Not applicable E to NW

Female Age 23 Female Age 35

Casualties

1 Driver or Rider

Slight Vehicle no.2

Female 35

Contributory Factors Report

Accident Date BETWEEN '01-May-2013' AND '30-Apr-2018'



Accident Reference: 150355318

Slight

 $\ensuremath{\mathtt{B2154}}$ MUSEUM ROAD 22 METRES NORTHWEST OF A288 KINGS TERRACE, SOUTHSEA, HAMPSHIRE

Grid Coords 463800/99486 Daylight Daylight

Tuesday 13/10/2015 08:50 Surface Dry

Weather Fine without high winds

405 Failed to look properly (Driver/Rider - Error)
406 Failed to judge other person's path/speed (Driver/Rider - Error)

Participant Confidence Did a police officer attend? Vehicle 001 Possible

Vehicle 001 Possible

Yes

Accident 9 of 15

Accident Description

VEH 1 (TRICYCLE) TRAVELLING NW ALONG B2154 MUSEUM ROAD ON SOUTH PAVEMENT, RIDES INTO ROAD WITHOUT LOOKING AND INTO PATH OF VEH 2 (CAR) TRAVELLING NW ALONG B2154 MUSEUM ROAD CAUSING COLLISION.

Vehicles

1 Pedal Cycle 2 Car

Going ahead other Going ahead other

No skid No skid Not applicable SE to NW Not contacted SE to NW

Daylight Dark/lights lit

Female Age 25 Male Age 38

Casualties

Slight Vehicle no.1

Accident Reference:150437830 Slight

KINGS ROAD AT JUNCTION WITH FLINT STREET, SOUTHSEA,

Accident 10 of 15

Monday 14/12/2015 21:16 Grid Coords 463869/99458 Surface Dry

Weather Fine without high winds

Contributory Factors

202 Defective lights or indicators (Vehicle Defects) 405 Failed to look properly (Driver/Rider - Error)

Vehicle 001 Possible

Participant Confidence Vehicle 002 Possible

Did a police officer attend? No - reported 'over the counter'

Accident Description

VEH 2 (CAR) TRAVELLING N TURNED LEFT INTO KINGS ROAD AND COLLIDED WITH THE NEARSIDE OF VEH 1 (P/CYCLE) TRAVELLING E, CAUSING THE RIDER TO FALL.

Vehicles

1 Pedal Cycle

Going ahead other 2 Car Turning left

No skid No skid

Not applicable E to W Not contacted S to W

Male Age 21 Not traced Age -1

1 Driver or Rider

Slight Vehicle no.1

Male 21

Contributory Factors Report

Accident Date BETWEEN '01-May-2013' AND '30-Apr-2018'



Accident Reference:160376719

Slight

B2154 MUSEUM ROAD AT JUNCTION WITH LANDPORT TERRACE,

Wednesday 05/10/2016 17:32 Surface Dry

Grid Coords 463826/99482 Weather Fine without high winds Daylight Daylight

Did a police

Accident 11 of 15

405 Failed to look properly (Driver/Rider - Error) 602 Careless/Reckless (Driver/Rider - Behaviour)

Participant Confidence Vehicle 002 Very likely Vehicle 002 Possible

officer attend? No - reported 'over the

counter

Accident Description

VEH 1 (P/CYCLE) WAS TRAVELLING N ACROSS THE RBT FROM KING'S TERRACE TOWARDS TO LANDPORT TERRACE. VEH 2 (CAR) TRAVELLING E FROM B2154 MUSEUM ROAD ENTERE DTHE RBT AND COLLIDED WITH THE NEARSIDE OF VEH 1, CAUSING THE RIDER TO FALL.

Vehicles

1 Pedal Cycle 2 Car

Going ahead other Going ahead other

No skid No skid Not applicable S to N Not contacted W to E

Female Age 21 Female Age 36

Casualties

Slight Vehicle no.1

Accident Reference:44170038660 Slight

A288 KINGS TERRANCE AT JUNCTION WITH B2154 MUSEUM ROAD, Accident 12 of 15 PORTSMOUTH, HAMPSHIRE

Tuesday 31/01/2017 05:25 Grid Coords 463826/99466

Surface Wet/Damp

Daylight Dark/lights lit

Weather Raining without high winds

Contributory Factors

405 Failed to look properly (Driver/Rider - Error)

506 Not displaying lights at night or poor visibility 507 Rider wearing dark clothing (Driver/Rider - Impairment)

Participant Confidence

Vehicle 001 Very likely Vehicle 002 Very likely Vehicle 002 Very likely

Did a police officer attend?

Accident Description

VEH 1 (CAR) TRAVELLING N ALONG A288 KINGS TERRACE TURNED LEFT ONTO MUSEUM ROAD, WHEN VEH 2 (P/CYCLE) WAS ALREADY TRAVELLING WEST ACROSS THE ROUNDABOUT. AS VEH 1 HAS PULLED OUT TO TURN LEFT VEH 2 COLLIDES INTO OFFSIDE OF VEH 1

Vehicles

1 Car 2 Pedal Cycle

Turning left Going ahead other No skid No skid

S to NW Negative Not applicable E to NW Female Age 48 Female Age 47

1 Driver or Rider Slight Vehicle no.2

Contributory Factors Report

Accident Date BETWEEN '01-May-2013' AND '30-Apr-2018'



Accident Reference: 44170075482 Slight

B2154 MUSEUM ROAD AT JUNCTION WITH KINGS TERRACE, SOUTHSEA, HAMPSHIRE

Daylight Dark/lights lit

Monday 27/02/2017 17:25 Surface Wet/Damp

Grid Coords 463825/99483

Weather Raining without high winds

401 Junction overshoot (Driver/Rider - Error) 405 Failed to look properly (Driver/Rider - Error) Participant Confidence Did a police officer attend?

Yes

Vehicle 001 Very likely Vehicle 001 Very likely

Accident 13 of 15

Accident Description

VEH 1 (CAR) TRAVELLING SE ALONG B2154 MUSEUM ROAD ENTERS RBT ACROSS THE PATH OF VEH 2 (P/CYCLE) TRAVELLING N AROUND THE RBT INTENDING TO EXIT ONTO A3 LANDPORT TERRACE AND COLLIDES, KNOCKING THE

RIDER OFF.

Vehicles

1 Car 2 Pedal Cycle Starting Going ahead right hand bend

No skid No skid Negative NW to N Not applicable S to N

Male Age 30

Female Age 19

Casualties

Slight Vehicle no.2

Accident Reference:44170111292 Slight

B2154 KINGS ROAD AT JUNCTION WITH A288 KINGS TERRACE, $\;\;$ Accident 14 of 15 PORTSMOUTH, HAMPSHIRE

Daylight Daylight

Saturday 25/03/2017 11:20 Grid Coords 463849/99464

Surface Dry

Weather Fine without high winds

Contributory Factors

Participant Confidence Vehicle 001 Possible Vehicle 002 Possible

Did a police officer attend?

405 Failed to look properly (Driver/Rider - Error) 405 Failed to look properly (Driver/Rider - Error)

Accident Description

VEH 2 (P/CYCLE) TRAVELLING NW ALONG B2154 MUSEUM ROAD IN MIDDLE OF LANE WAITING TO ENTER RBT WHEN VEH 1 (CAR) TRAVELLING FROM BEHIND ATTEMPTED TO PASS VEH 2 HOWEVER WING MIRROR CLIPPED ARM OF VEH 2'S RIDER CAUSING THEM TO FALL OFF.

Vehicles

2 Pedal Cycle

 $\ensuremath{\text{O/T}}$ moving vehicle on its $\ensuremath{\text{O/S}}$. No skid Waiting to go ahead but held up No skid

Negative E to NW Not applicable E to NW Male Age 57 Male Age 26

Casualties

1 Driver or Rider Slight Vehicle no.2 Male 26

Contributory Factors Report

Accident Date BETWEEN '01-May-2013' AND '30-Apr-2018'



A288 LANDPORT TERRACE AT JUNCTION WITH B2154 KINGS ROAD, SOUTHSEA, HAMPSHIRE. Accident Reference: 44170439704 Slight Accident 15 of 15

Grid Coords 463846/99490 Saturday 11/11/2017 15:00 Daylight Daylight

Surface Dry Weather Fine without high winds

Participant Confidence

Did a police officer attend? No - reported 'over the counter' Vehicle 002 Very likely Vehicle 002 Very likely 405 Failed to look properly (Driver/Rider - Error) 602 Careless/Reckless (Driver/Rider - Behaviour)

Accident Description

VEH1 (CAR) TRAVELLING SE ON A288 LANDPORT TERRACE IS WAITING AT ROUNDABOUT AND HIT IN REAR BY VEH 2 (CAR).

Vehicles Waiting to go ahead but held up No skid Stopping No skid Not contacted NW to SE Not contacted NW to SE Female Age 31 Female Age 31 1 Car 2 Car Stopping

Casualties

1 Driver or Rider Slight Vehicle no.1 Female 31 2 Passenger Slight Vehicle no.1 Female 10

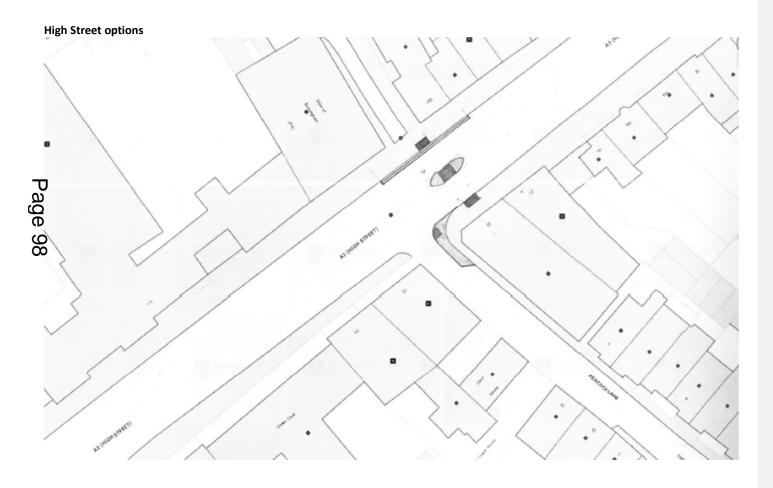




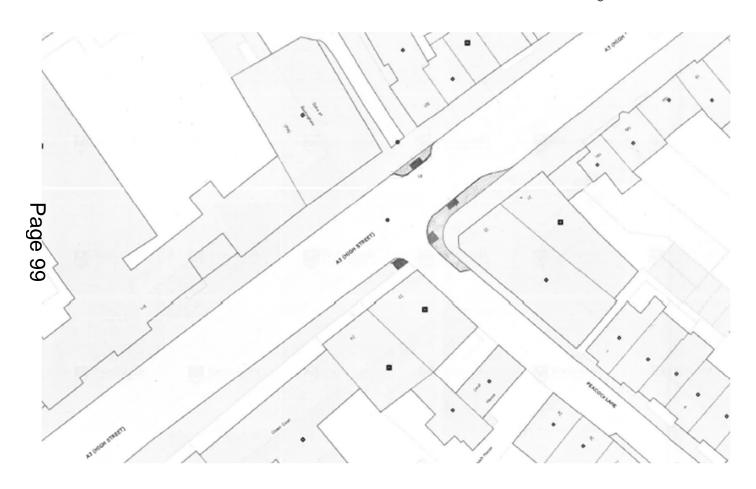
APPENDIX D

Feasibility sketches

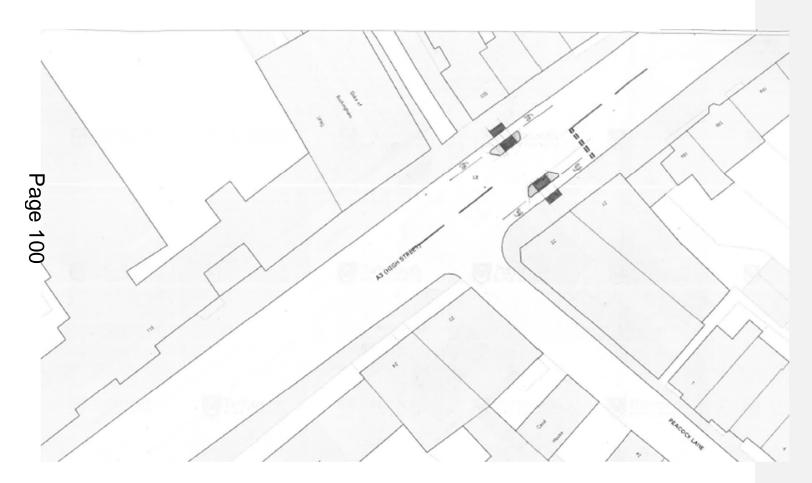








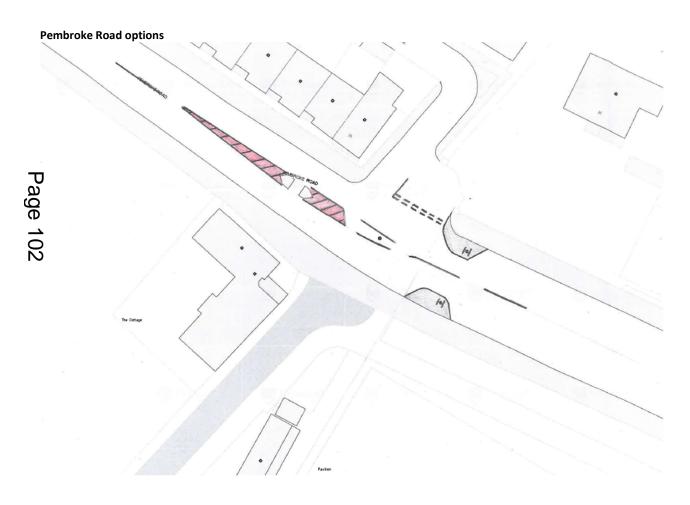




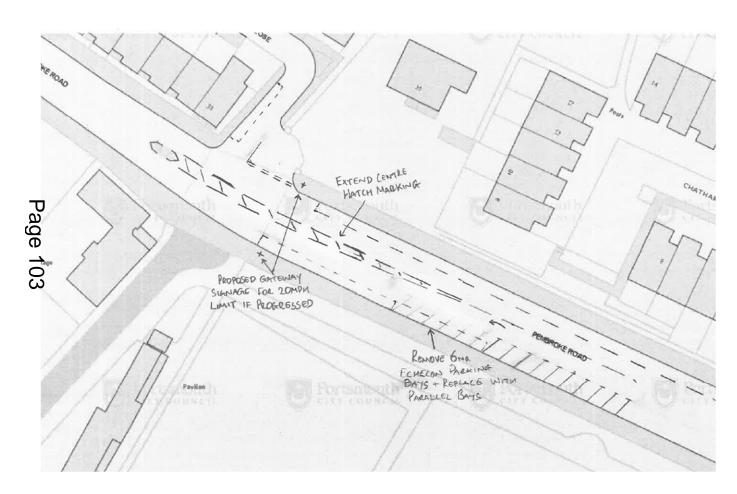




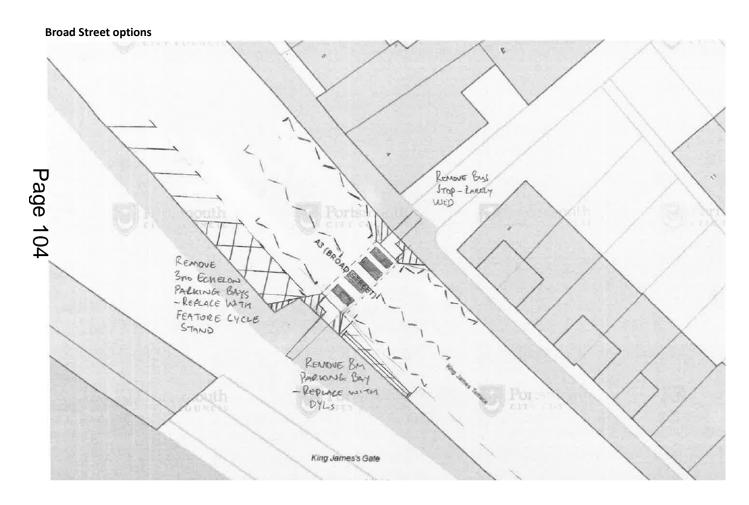




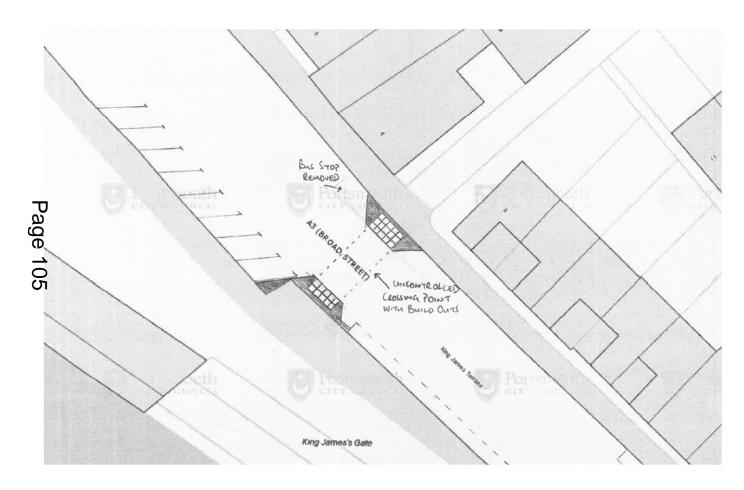




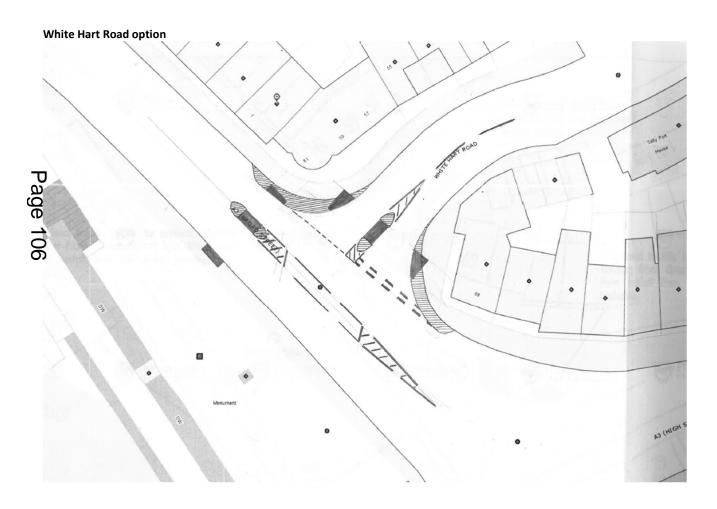




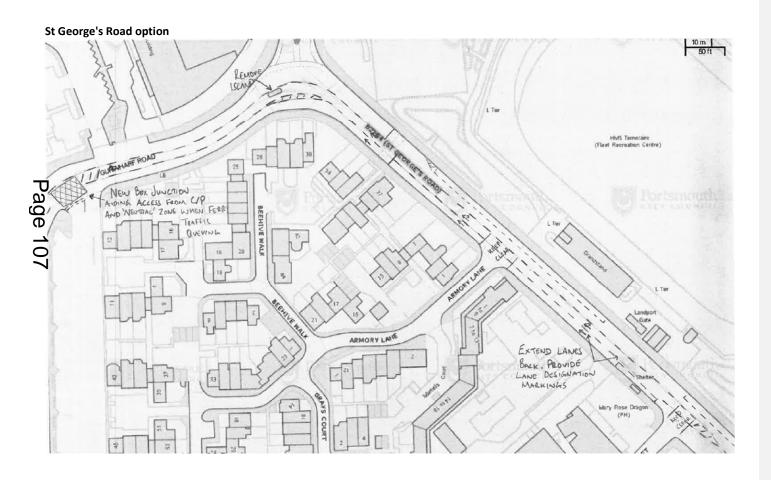
















APPENDIX E

Additional Traffic Survey - High Street





Traffic Evaluation



Author Institution Hampshire County Council Hampshire Department **Economy Transport & Environment** The Castle Street SO23 8UD Postal Code City Winchester United Kingdom Country Contact Phone E-Mail

Built with DataCollect Webreporter version 1.0 at 29/11/2018 11:15:48

Site

Name 00008371

Dir. Oncoming (name) SB

Dir. Outgoing (name) NB

Posted Speed Limit

Comment

Time Range

 Start Date
 20/11/2018 00:00

 End Date
 27/11/2018 00:01

 Days
 Mo, Tu, We, Th, Fr, Sa, Su

 Time Interval
 60 minutes

Time Frame / Day 00:00 - 23:59

Length Classes

Device type

[L in m]

SDR

Cross-sect	tion			S	В					N	В		
Time	Σ	Σ	1	2	3	4	5	Σ	1	2	3	4	5
00:00-06:00	654	319	8	280	23	6	2	335	1	287	38	6	3
06:00-09:00	5440	1858	22	1450	192	116	78	3582	67	2734	535	182	64
15:00-19:00	10198	5341	48	4620	463	110	100	4857	41	3605	884	229	98
06:00-22:00	31447	14703	130	12401	1276	517	379	16744	173	12403	2801	1027	340
00:00-24:00	33268	15517	146	13115	1345	529	382	17751	177	13258	2925	1048	343

Speed Figures

[V in mph]

	Vmin	Vmax	Vavg	V15	V50	V85	Vexc %
Cross-section	3	59	24	19	24	29	73.1
SB	3	52	24	19	24	29	69.6
NB	3	59	25	19	24	31	76.2

Descriptions

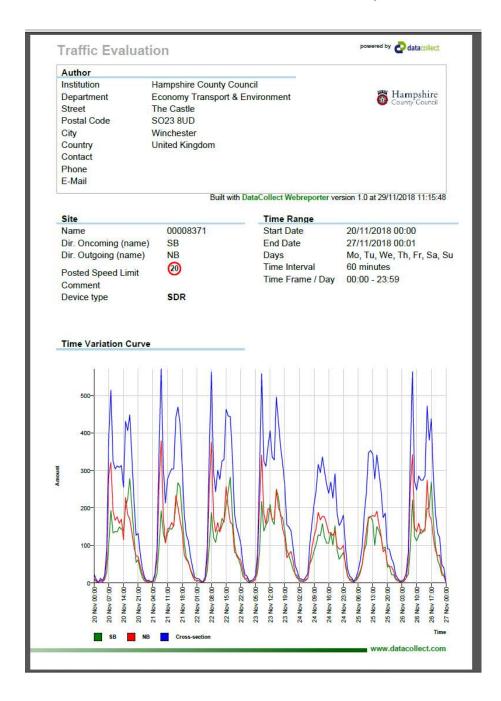
Vmin: Minimal velocity Vmax: Maximal velocity Vavg: Average velocity

Vavg: Average velocity V15: Critical velocity for the first 15% of vehicles V50: Critical velocity for the first 50% of vehicles V85: Critical velocity for the first 85% of vehicles

Vexc %: Speeding in %

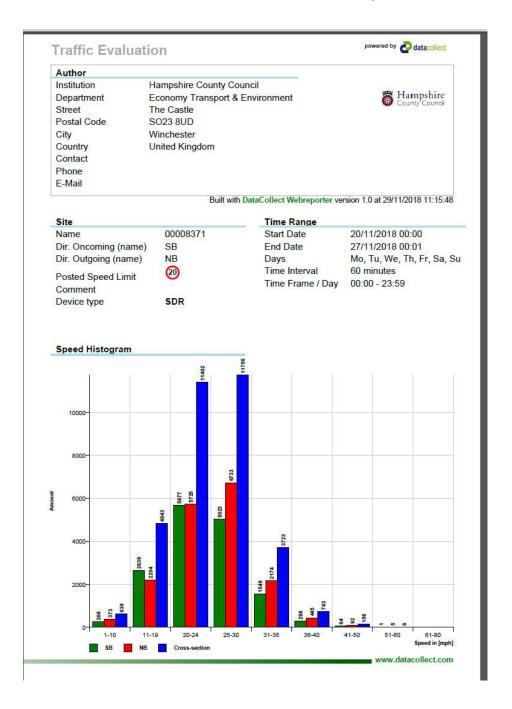






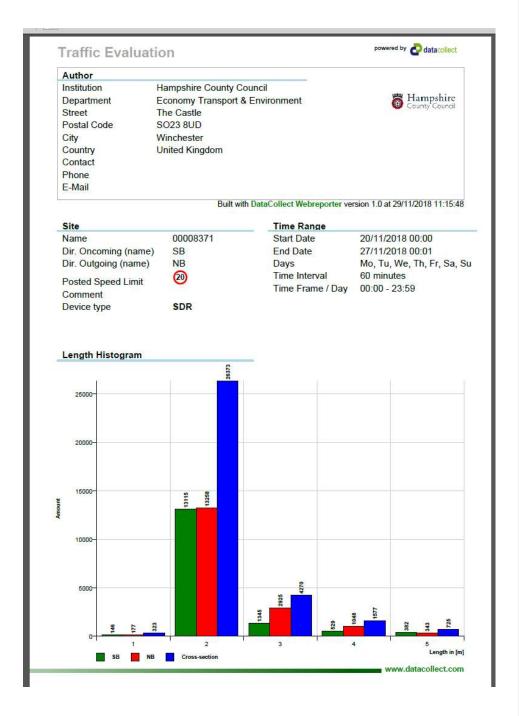














Formatted: Right: 3.44 cm, Top: 1 cm, Width: 29.7 cm, Height: 21 cm



īme	Σ		N	6		6	1.10	17.10	20.24	28.30	37.35	36.40	47-50	22.60	67-80	· Nation	VAIN	VMES	778	788	788
0/11/2018 00:00	22	0	17	5	0	0	0	1	1	7	7	6	0	0	0	19	31	39	26	31	37
0/11/2018 01:00	9	0	7	2	0	0	0	2	2	5	0	0	0	0	0	18	25	29	18	26	29
0/11/2018 02:00	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	21	21	21	21	21	21
0/11/2018 03:00	12	0	11	0	0	1	0	1	1	4	4	0	1	1	0	18	32	59	21	31	44
0/11/2018 04:00	6	1	4	1	0	0	0	0	0	1	3	2	0	0	0	26	33	39	26	34	39
0/11/2018 05:00	20	0	15	4	1	0	0	1	4	6	7	1	1	0	0	16	29	41	21	29	34
0/11/2018 06:00	90	0	63	17	6	4	1	6	20	34	20	7	2	0	0	9	28	44	21	26	32
0/11/2018 07:00	395	0	269	91	29	6	0	38	123	164	58	7	4	1	0	11	26	52	21	26	31
0/11/2018 08:00	514	33	353	69	37	22	90	187	166	60	11	0	0	0	0	3	18	32	9	19	24
0/11/2018 09:00	325	11	212	59	30	13	11	47	102	127	36	1	1	0	0	3	24	41	19	24	29
0/11/2018 10:00	304	1	241	39	16	7	9	34	125	104	31	1	0	0	0	6	24	36	19	24	29
0/11/2018 11:00	312	4	240	26	31	11	8	47	103	127	22	5	0	0	0	6	24	37	19	24	29
0/11/2018 12:00	308	2	260	26	9	11	2	26	123	115	37	2	3	0	0	6	25	42	21	24	29
0/11/2018 13:00	313	0	239	47	17	10	3	59	114	111	22	3	1	0	0	8	24	41	19	24	29
0/11/2018 14:00	255	2	202	32	12	7	2	19	99	107	25	3	0	0	0	6	25	39	21	24	29
0/11/2018 15:00	431	1	346	61	15	8	5	124	200	86	12	3	1	0	0	3	22	44	18	21	26
20/11/2018 16:00	406	3	303	71	21	8	4	58	158	157	24	5	0	0	0	8	24	39	19	24	29
20/11/2018 17:00	448	2	365	56	14	11	3	63	189	152	35	6	0	0	0	8	24	39	19	24	29
20/11/2018 18:00	338	4	275	44	9	6	2	33	123	126	41	10	3	0	0	6	25	44	21	24	31
20/11/2018 19:00	222	1	178	35	4	4	4	26	81	70	31	9	1	0	0	8	25	41	19	24	31
20/11/2018 20:00	127	0	110	13	3	1	0	7	32	55	27	5	1	0	0	11	27	41	21	26	31
20/11/2018 21:00	132	2	106	21	3	0	0	10	35	56	21	9	1	0	0	11	27	41	21	26	31
20/11/2018 22:00	77	1	66	9	1	0	0	4	20	35	15	2	1	0	0	16	27	42	21	26	31
20/11/2018 23:00	39	0	34	5	0	0	0	1	3	15	16	4	0	0	0	19	30	39	26	31	34
Tue, 20 Nov.]	Σ	1	· v	0	*	6	1.10	17-79	20.24	25.30	31.35	38.40	47.50	27-60	08-19	Mulin	P. Z.	Ž.	ms	130	185
0:00-06:00	70	1	55	12	1	1	0	5	9	23	21	9	2	1	0	16	30	59	21	29	37
6:00-09:00	999	33	685	177	72	32	91	231	309	258	89	14	6	1	0	3	22	52	14	21	29
5:00-19:00	1623	10	1289	232	59	33	14	278	670	521	112	24	4	0	0	3	24	44	19	24	27
6:00-22:00	4920	66	3762	707	256	129	144	784	1793	1651	453	76	18	1	0	3	24	52	19	24	29
0:00-24:00	5106	68	3917	733	258	130	144	794	1825	1724	505	91	21	2	0	3	24	59	19	24	29



Hampshire County (Council: (000083	871 (Dire	ection:	Cross-s	ection)												powe	red by	data data	collect
Time	Σ		~	•	٠	6	7.70	17.79	20.24	28.30	34.35	36.40	14.50	27.60	02-20	Male	VAN	VMax	1718	130	28
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21/11/2018 02:00	7	0	7	0	0	0	0	0	3	1	3	0	0	0	0	19	27	31	19	29	31
21/11/2018 03:00	3	0	3	0	0	0	0	0	1	2	0	0	0	0	0	22	26	29	22	26	29
21/11/2018 04:00	5	0	4	0	1	0	0	1	1	0	2	1	0	0	0	19	28	36	19	31	36
21/11/2018 05:00	23	0	22	1	0	0	0	1	7	5	6	2	2	0	0	16	29	42	21	26	36
21/11/2018 06:00	88	1	76	3	3	5	0	6	19	31	25	4	3	0	0	16	28	47	21	26	34
21/11/2018 07:00	360	3	306	31	11	9	0	14	116	161	57	11	1	0	0	16	27	41	21	26	31
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21/11/2018 10:00	213	1	157	31	16	8	4	11	94	83	16	5	0	0	0	6	25	39	21	24	29
21/11/2018 11:00	276	1	205	41	17	12	1	33	103	113	24	1	1	0	0	3	25	41	21	24	29
21/11/2018 12:00	292	1	226	39	19	7	1	44	91	116	34	6	0	0	0	8	25	39	19	24	29
21/11/2018 13:00	304	4	216	47	30	7	2	34	117	119	27	5	0	0	0	8	25	39	19	24	29
21/11/2018 14:00	304	0	230	48	16	10	1	58	117	96	29	3	0	0	0	9	24	39	19	24	29
21/11/2018 15:00	441	3	355	53	22	8	19	141	170	95	15	0	1	0	0	6	21	41	16	21	26
21/11/2018 16:00	469	1	354	80	27	7	8	113	203	123	18	4	0	0	0	6	23	39	18	21	26
21/11/2018 17:00	424	5	335	64	11	9	4	74	155	155	30	4	2	0	0	6	24	42	19	24	29
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21/11/2018 19:00	184	1	149	25	6	3	3	29	57	62	26	7	0	0	0	6	25	39	19	24	31
21/11/2018 20:00	128	0	112	11	4	1	0	9	36	61	16	5	1	0	0	14	26	41	21	26	31
21/11/2018 21:00	112	1	99	12	0	0	2	6	27	53	21	3	0	0	0	8	26	37	21	26	31
21/11/2018 22:00	70	2	53	14	1	0	1	3	19	28	11	5	3	0	0	8	27	42	21	26	32
21/11/2018 23:00	41	1	28	11	1	0	0	4	10	14	11	2	0	0	0	16	27	39	21	27	32
[Wed, 21 Nov.]	Σ	•	~	ъ	•	ю	1,10	17-19	\$5.02	25.30	34.35	36-40	47.50	22-60	09-49	Value	MAN	Max	N _S	024	282
00:00-06:00	60	0	56	2	2	0	0	2	16	14	18	6	4	0	0	16	29	42	21	29	36
06:00-09:00	1020	14	853	88	37	28	52	232	309	300	105	17	5	0	0	6	23	47	16	22	29
15:00-19:00	1652	10	1292	247	72	31	33	374	648	483	97	12	5	0	0	6	23	45	18	22	27
06:00-22:00	4794	35	3769	633	236	121	101	852	1686	1623	445	74	13	0	0	3	24	47	19	24	29
00:00-24:00	4965	38	3906	660	240	121	102	861	1731	1679	485	87	20	0	0	3	24	47	19	24	29



Hampshire County (Council: (000083	371 (Dire	ection:	Cross-s	ection)												powe	red by	data	collect
Time	Σ		~	6	٠	6	7.70	17-19	20.24	25.30	34.35	36.40	47.50	27.60	08-40	Valin	Za Wa	Max	81/1	8	788
22/11/2018 00:00	15	0	12	2	1	0	0	1	2	- 6	5	1	0	0	0	18	28	37	21	29	31
22/11/2018 01:00	11	0	8	2	1	0	0	2	0	3	5	1	0	0	0	14	28	37	19	31	31
22/11/2018 02:00	11	0	8	3	0	0	0	3	2	5	1	0	0	0	0	18	24	31	19	24	27
22/11/2018 03:00	5	0	5	0	0	0	0	0	0	1	3	1	0	0	0	26	31	36	26	31	36
22/11/2018 04:00	3	0	2	1	0	0	0	0	0	2	1	0	0	0	0	24	28	32	24	26	32
22/11/2018 05:00	16	-1	14	1	0	0	0	2	4	4	4	2	0	0	0	18	28	37	24	29	34
22/11/2018 06:00	95	0	64	18	8	5	0	3	21	39	24	5	3	0	0	18	28	42	21	27	34
22/11/2018 07:00	357	3	270	55	21	8	1	19	108	157	57	13	2	0	0	6	27	44	21	26	31
22/11/2018 08:00	563	8	432	80	34	9	31	133	236	142	20	1	0	0	0	4	22	36	16	21	26
22/11/2018 09:00	297	2	204	59	19	13	3	22	97	108	52	15	0	0	0	8	26	39	21	26	31
22/11/2018 10:00	243	0	183	35	16	9	1	20	78	96	36	11	1	0	0	4	26	42	21	26	31
22/11/2018 11:00	301	5	219	43	25	9	3	37	110	112	31	5	3	0	0	6	25	44	19	24	29
22/11/2018 12:00	276	1	212	33	20	10	2	22	112	98	38	3	1	0	0	6	25	41	21	24	31
22/11/2018 13:00	325	2	246	50	17	10	1	40	116	125	37	4	2	0	0	6	25	44	19	24	29
22/11/2018 14:00	329	0	237	59	22	11	1	41	119	125	36	7	0	0	0	9	25	39	19	24	29
22/11/2018 15:00	463	5	348	79	23	8	9	118	184	131	18	3	0	0	0	6	22	37	16	21	26
22/11/2018 16:00	445	7	343	71	15	9	7	106	161	137	27	7	0	0	0	6	23	39	18	22	27
22/11/2018 17:00	444	6	340	76	14	8	0	59	198	148	35	3	1	0	0	11	24	44	19	24	29
22/11/2018 18:00	338	3	266	51	9	9	2	41	112	135	42	4	2	0	0	8	25	42	21	24	29
22/11/2018 19:00	186	4	148	29	2	3	3	12	51	89	24	5	2	0	0	6	26	41	21	26	31
22/11/2018 20:00	149	1	114	29	4	1	1	10	34	74	20	8	2	0	0	8	27	47	21	26	31
22/11/2018 21:00	129	0	115	11	2	1	0	7	32	62	24	4	0	0	0	16	27	37	21	26	31
22/11/2018 22:00	105	2	81	15	6	1	5	12	23	38	19	5	3	0	0	6	26	42	19	26	34
22/11/2018 23:00	52	0	45	7	0	0	1	0	13	23	11	3	1	0	0	8	28	44	22	26	34
[Thu, 22 Nov.]	Σ	•	~	•			1.10	77-79	20.24	25.30	31.35	36-40	41-50	21-60	08-19	Malin	MAN	Max	17.5	120	188
00:00-06:00	61	1	49	9	2	0	0	8	8	21	19	5	0	0	0	14	28	37	21	29	31
06:00-09:00	1016	11	767	153	63	22	32	155	365	338	102	19	5	0	0	4	24	44	19	24	29
15:00-19:00	1690	21	1297	277	61	34	18	324	655	551	122	17	3	0	0	6	24	44	19	24	29
06:00-22:00	4940	47	3741	778	251	123	65	690	1769	1778	521	98	19	0	0	4	25	47	19	24	29
00:00-24:00	5158	50	3916	809	259	124	71	710	1813	1860	570	111	23	0	0	4	25	47	19	24	29



Time	Σ	ĸ.	*	6	*	9	1.10	17.10	20.24	28.30	37.35	36.40	47.50	27.60	08-19	Mile	Z4 NA	Max	778	130	788
23/11/2018 00:00	22	0	20	2	0	0	0	2	3	10	4	3	0	0	0	18	28	39	24	26	34
23/11/2018 01:00	18	1	13	3	1	0	1	1	3	7	4	2	0	0	0	8	27	37	21	29	32
23/11/2018 02:00	5	0	4	1	0	0	0	0	1	2	1	0	1	0	0	24	31	41	24	29	41
23/11/2018 03:00	6	0	6	0	0	0	0	0	3	1	1	1	0	0	0	19	28	37	19	26	37
23/11/2018 04:00	9	0	7	2	0	0	0	1	1	4	2	1	0	0	0	18	28	36	22	27	34
23/11/2018 05:00	19	1	14	4	0	0	1	2	4	5	6	1	0	0	0	8	27	39	16	26	34
23/11/2018 06:00	77	0	50	16	4	7	0	5	16	26	22	7	1	0	0	16	28	42	21	29	34
23/11/2018 07:00	306	0	229	50	18	9	3	23	84	129	55	12	0	0	0	6	26	39	21	26	31
23/11/2018 08:00	558	10	421	86	30	11	22	189	225	103	17	1	1	0	0	3	21	42	16	21	26
23/11/2018 09:00	325	2	228	62	24	9	2	31	92	130	64	6	0	0	0	6	26	37	21	26	31
23/11/2018 10:00	311	2	236	47	17	9	1	17	103	140	42	7	1	0	0	8	26	44	21	26	31
23/11/2018 11:00	363	2	276	51	25	9	3	46	131	135	41	6	1	0	0	6	25	41	19	24	29
23/11/2018 12:00	406	3	321	52	23	7	7	72	164	134	20	6	3	0	0	6	24	44	19	24	29
23/11/2018 13:00	336	3	255	49	22	7	2	39	134	122	30	8	1	0	0	3	25	47	21	24	29
23/11/2018 14:00	328	3	251	49	16	9	1	33	119	123	47	4	1	0	0	8	25	42	21	26	31
23/11/2018 15:00	496	5	392	72	19	8	49	201	147	90	9	0	0	0	0	4	19	32	11	19	26
23/11/2018 16:00	430	5	325	67	27	6	37	94	166	106	23	4	0	0	0	3	22	39	14	21	26
23/11/2018 17:00	364	4	278	63	9	10	0	48	131	133	44	6	2	0	0	11	25	41	19	24	29
23/11/2018 18:00	318	5	257	40	9	7	4	21	100	113	64	11	5	0	0	6	26	44	21	26	31
23/11/2018 19:00	262	3	198	51	7	3	0	14	87	106	44	11	0	0	0	11	26	39	21	26	31
23/11/2018 20:00	155	0	127	22	5	1	2	15	47	64	21	4	2	0	0	6	26	42	21	26	31
23/11/2018 21:00	149	4	111	29	5	0	1	13	50	63	15	6	1	0	0	8	25	45	21	24	29
23/11/2018 22:00	139	1	120	15	3	0	0	8	43	62	20	6	0	0	0	11	26	39	21	26	31
23/11/2018 23:00	94	0	82	9	3	0	0	3	24	41	22	3	1	0	0	13	27	41	21	26	31
[Fri, 23 Nov.]		*	*	6	*		1.10	17.18	20.24	25.30	37.38	36.40	47-50	27-60	08-40	Malle	A PA	Max	1,10	120	284
00:00-06:00	79	2	64	12	1	0	2	6	15	29	18	8	1	0	0	8	28	41	21	26	34
06:00-09:00	941	10	700	152	52	27	25	217	325	258	94	20	2	0	0	3	23	42	18	22	29
15:00-19:00	1608	19	1252	242	64	31	90	364	544	442	140	21	7	0	0	3	23	44	16	22	29
06:00-22:00	5184	51	3955	806	260	112	134	861	1796	1717	558	99	19	0	0	3	24	47	19	24	29
00:00-24:00	5496	54	4221	842	267	112	136	878	1878	1849	618	116	21	0	0	3	24	47	19	24	29



							-		-		1							- 1		0.0	-
Time	Σ	*	•				1.10	77.70	20.24	25.30	37.35	36.40	47-50	57.60	67-80	VALE	VAND	Max	1715	130	788
24/11/2018 00:00	46	1	39	5	1	0	1	1	7	18	14	4	1	0	0	8	29	42	24	29	34
24/11/2018 01:00	31	0	27	4	0	0	0	1	4	13	8	3	2	0	0	14	30	44	24	29	36
24/11/2018 02:00	12	0	11	0	1	0	0	0	2	4	4	1	0	1	0	21	31	52	22	31	39
24/11/2018 03:00	10	0	8	2	0	0	0	3	3	1	3	0	0	0	0	14	24	34	18	24	34
24/11/2018 04:00	7	0	6	1	0	0	0	0	1	5	0	1	0	0	0	24	29	37	24	29	29
24/11/2018 05:00	15	0	12	1	0	2	0	0	2	6	6	1	0	0	0	24	30	37	26	29	32
24/11/2018 06:00	24	0	20	3	1	0	0	2	4	11	6	0	1	0	0	16	28	42	21	27	31
24/11/2018 07:00	105	0	86	7	8	4	1	10	38	41	14	0	1	0	0	8	25	42	21	24	29
24/11/2018 08:00	158	5	136	2	9	6	0	7	38	74	29	5	5	0	0	11	27	44	21	26	31
24/11/2018 09:00	209	5	175	19	4	6	0	12	57	93	39	8	0	0	0	13	27	39	21	26	31
24/11/2018 10:00	247	1	225	7	9	5	2	22	63	99	51	9	1	0	0	4	26	44	21	26	31
24/11/2018 11:00	316	2	273	28	5	8	0	25	103	134	46	8	0	0	0	11	26	39	21	26	31
24/11/2018 12:00	294	2	252	23	9	8	0	35	103	111	31	11	3	0	0	11	25	42	19	24	31
24/11/2018 13:00	336	4	292	22	10	8	7	50	129	110	37	3	0	0	0	6	24	39	19	24	29
24/11/2018 13:00 24/11/2018 14:00 24/11/2018 15:00	298	1	266	21	2	8	1	25	82	135	44	10	1	0	0	8	26	41	21	26	31
24/11/2018 15:00	263	3	248	4	3	5	1	41	80	112	21	6	2	0	0	9	25	42	19	24	29
24/11/2018 16:00	239	3	195	22	11	8	3	28	79	94	28	6	1	0	0	6	25	41	21	24	29
24/11/2018 17:00	269	3	242	15	2	7	2	39	91	95	32	8	2	0	0	8	25	42	19	24	31
24/11/2018 18:00	226	7	216	3	0	0	8	39	67	78	25	8	1	0	0	6	24	41	18	24	31
24/11/2018 19:00	291	6	269	14	2	0	4	33	110	110	30	4	0	0	0	8	25	39	19	24	29
24/11/2018 20:00	186	1	170	15	0	0	1	20	58	63	36	6	2	0	0	6	26	44	21	26	31
24/11/2018 21:00	153	2	148	3	0	0	1	11	44	59	29	7	1	1	0	8	27	54	21	26	31
24/11/2018 22:00	163	1	146	15	1	0	1	13	42	74	23	8	2	0	0	9	26	44	21	26	31
24/11/2018 23:00	181	1	168	10	2	0	0	6	31	94	34	12	4	0	0	19	28	44	24	27	32
[Sat, 24 Nov.]	Σ		*	6	•	0	2-10	17-19	20-24	25.30	37.35	36-40	47-50	09-19	08-19	Valein	MM	Max	514	120	Nas
00:00-06:00	121	-1	103	13	2	2	1	5	19	47	35	10	3	1	0	8	29	52	24	29	34
06:00-09:00	287	5	242	12	18	10	1	19	80	126	49	5	7	0	0	8	27	44	21	26	31
15:00-19:00	997	16	901	44	16	20	14	147	317	379	106	28	6	0	0	6	25	42	19	24	29
06:00-22:00	3614	45	3213	208	75	73	31	399	1146	1419	498	99	21	1	0	4	25	54	21	26	31
00:00-24:00	4079	48	3630	246	80	75	33	423	1238	1634	590	129	30	2	0	4	26	54	21	26	31

5/8



Гіте	Σ	*	~	•	•		1.70	17.10	2024	25.30	37.35	36.40	47.50	57.60	02-20	Nation 1	VAVE	VMax	175	130	788
25/11/2018 00:00	98	1	92	5	0	0	0	2	10	42	30	9	5	0	0	14	30	47	26	29	34
25/11/2018 01:00	37	0	35	2	0	0	0	2	6	13	10	5	1	0	0	18	30	41	22	29	36
25/11/2018 02:00	18	0	17	1	0	0	0	0	3	8	4	3	0	0	0	21	30	39	24	27	36
25/11/2018 03:00	13	1	12	0	0	0	0	0	1	5	4	2	1	0	0	24	32	49	26	31	37
25/11/2018 04:00	4	0	4	0	0	0	0	0	0	1	2	1	0	0	0	29	34	37	29	34	37
25/11/2018 05:00	13	0	8	1	2	2	0	1	2	4	5	1	0	0	0	18	29	37	21	29	34
25/11/2018 06:00	31	2	27	2	0	0	1	6	0	6	11	5	1	1	0	8	29	52	16	31	37
25/11/2018 07:00	57	0	55	1	1	0	0	4	12	22	12	6	1	0	0	14	28	41	21	26	34
25/11/2018 08:00	98	3	87	4	4	0	1	5	18	39	25	8	2	0	0	4	28	44	22	29	34
25/11/2018 09:00	183	1	151	25	4	2	1	11	34	85	41	8	3	0	0	9	28	44	22	27	31
25/11/2018 10:00	242	2	154	30	51	5	6	33	71	91	35	4	2	0	0	6	25	42	19	26	31
25/11/2018 11:00	347	1	221	51	71	3	12	84	128	104	14	4	1	0	0	6	22	42	16	22	26
25/11/2018 12:00	353	3	267	29	51	3	9	71	138	107	24	4	0	0	0	6	23	37	18	22	27
25/11/2018 13:00	344	4	303	32	2	3	12	40	125	125	34	7	1	0	0	6	24	44	19	24	29
25/11/2018 14:00	277	1	223	45	4	4	3	21	83	130	34	5	1	0	0	3	26	44	21	26	29
25/11/2018 15:00	341	2	296	35	4	4	0	19	130	146	39	6	1	0	0	11	26	44	21	26	29
25/11/2018 16:00	295	3	269	14	4	5	2	21	119	118	31	3	1	0	0	4	25	42	21	24	29
25/11/2018 17:00	247	1	206	35	3	2	2	25	79	100	32	8	1	0	0	6	26	41	21	26	31
25/11/2018 18:00	174	0	128	27	12	7	0	29	56	52	25	11	0	1	0	11	25	52	19	24	31
25/11/2018 19:00	186	3	166	13	2	2	2	22	68	71	21	2	0	0	0	4	25	36	19	24	29
25/11/2018 20:00	92	0	83	7	2	0	0	11	34	33	11	1	2	0	0	11	25	42	19	24	31
25/11/2018 21:00	89	0	86	1	2	0	0	2	16	45	17	8	1	0	0	16	28	41	24	26	34
25/11/2018 22:00	65	0	61	4	0	0	0	4	15	33	12	1	0	0	0	16	27	37	21	26	31
25/11/2018 23:00	52	0	48	4	0	0	0	3	11	18	11	9	0	0	0	16	28	39	21	26	36
[Sun, 25 Nov.]	Σ		~	0	*	6	1.10	17-19	20.24	25.30	34.35	36.40	47-50	57.60	02-20	Mallin	MM	Max	17.5	130	Sen
00:00-06:00	183	2	168	9	2	2	0	5	22	73	55	21	7	0	0	14	30	49	24	29	36
06:00-09:00	186	5	169	7	5	0	2	15	30	67	48	19	4	1	0	4	28	52	21	29	34
15:00-19:00	1057	6	899	111	23	18	4	94	384	416	127	28	3	1	0	4	25	52	21	24	31
06:00-22:00	3356	26	2722	351	217	40	51	404	1111	1274	406	90	18	2	0	3	25	52	19	24	31
00:00-24:00	3656	28	2999	368	219	42	51	416	1159	1398	484	121	25	2	0	3	25	52	19	26	31





APPENDIX F

Additional Traffic Survey - High Street Superseded Analysis





High Street

The survey captured 24 days of data recording in excess of 112k vehicles during that period. This represents an average of approx. 4877 vehicles per day over the survey period. The data is presented as a series of "speed bins" with recorded vehicles sorted according to their speed. An extract from the results is replicated below showing the "headline" figures.

A	В	С	D	E	F	G	Н	1	J	K	L	M	N	0	P	Q	R	S	T
Date	Time	Class	C1/1-1	5 C2 / 16 - 19	C3 / 20 - 24	C4 / 25 - 30	C5 / 31 - 36	C6 / 37 - 50	C7 / 51 - 55	C8 / 56 - 60	C9 / 61 - 150					Total	Average [Mile/h]	Excess. speed [%]	V85 [Mile/h]
/1	Total global	(M)Bikes	6479	4307	2188	449	31	4	0	0	0					13458	15	4	21
/2	Total global	Cars	15745	37270	33001	8890	660	75	1	0	o					95642	19	10	24
/3	Total global	Vans	474	1513	955	103	2	o	0	0	o					3047	18	3	22
/4	Total global	HGV/Bus	10	17	12	o	o	o	0	0	o					39	17	o	21
Statistics		Total volume	22708	43107	36156	9442	693	79	'n	0	6					112186	19	9	23

As is shown in the above table, the average speed recorded during the survey was 19mph. The 85th percentile speed (the speed which 85% of vehicles were travelling at or below) was recorded at 23mph. To put this in context, the speed limit of the road is 20mph and therefore on the whole, these figures represent a very good result and a reasonable decrease in speed over previously recorded speeds at this site.

It is clear from the detailed results that the clusters of excessive speed occur predominantly overnight. Typically the cluster of speeding starts at approx. 22:00hrs and ends at approx. 08:00hrs with weekends seeing a slightly extended period of excessive speed, typically ending at approx. 10:00hrs. Generally, most of the data recorded during daytime hours returned speeds of 24mph or less suggesting that the amount of vehicles on the road had at least some influence on speed at High Street. Volumes are broadly 200-300 veh/hr through the day (off-peak) with the AM and PM peaks increasing to approx. 500 vehicles in an hour period. Overnight, traffic volumes were recorded as low as 5-10vehicles in an hour; in almost all instances of an 85th percentile speed being recorded of 30mph or greater, the volumes recorded were less than 20vehicles per hour.

The highest speed recorded during the survey period was a single vehicle travelling between 51-55mph on a Sunday between 11:00-12:00. A further 79 vehicles were recorded within the next lowest speed bin, albeit this had a range of 37-50mph. The majority of these vehicles were recorded overnight with a few sporadic instances during daytime hours. A total of 773 vehicles were recorded as travelling over 30mph which although seemingly high, represents less than 1% of the overall total vehicles recorded.

When assessing Northbound and Southbound separately, the northbound flow is greater than the southbound flow by approximately 5k over the study period. There was significant fluctuation in traffic flows recorded on weekdays ranging from approx. 2400 to 3000 vehicles per day northbound. The traffic flows southbound are fairly consistent however with approx. 2500 vehicles on average per day travelling along High Street. In terms of speed, in excess of four times more vehicles were recorded traveling over 30mph in a northbound direction than southbound, with 641 vehicles and 152 vehicles recorded respectively.

