ATKINS

Member of the SNC-Lavalin Group

# Farnham Town Centre: Optimised Infrastructure Plan

## Project 2 – Speed Study

# Notice

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# Introduction

Atkins has been commissioned by Surrey County Council to support the creation of an Optimised Infrastructure Plan (OIP) for Farnham, jointly produced by Surrey County Council, Waverley Borough Council and Farnham Town Council, with the support of Jeremy Hunt MP. The OIP is based on a collective assessment of the issues facing the town and how they can be addressed, with the goal of facilitating the required change in order to help Farnham become a better, more environmentally-friendly place for those who live, work, study in or visit the town.

Understanding the issues and developing effective solutions for the town centre is a critical part of the OIP. Key stakeholders have emphasised the need to rapidly understand the current problems, their causes, and potential solutions. There is a need for both quick wins (to lock-in the benefits of the emergency road space reallocation) and long-term solutions to the problems faced in the town centre.

The OIP includes a work programme to develop evidence, consider scenarios, identify and sift options, and develop the optimised programme. In conjunction, there is a need for rapid assessment of specific issues.

A particular perceived problem with speeding has been identified. As a critical issue to the success of the overall OIP, this Study has been undertaken to understand issues caused by speeding vehicles in Farnham and surrounds and identify how they might be addressed.

The Study comprises:

- Review of data and evidence base.
- Identification of critical speed issues and, where possible, root causes.
- Identification of a range of potential intervention measures, opportunities, constraints and recommendations.

# Introduction

For clarity, the definitions adopted for this Study are:

- Mean speed – the average speed of recorded vehicles in a given time period.
- 85$^{th}$ percentile (85%ile) speed – the speed at or below which 85% of motorists were recorded in a given time period. It can indicate the speed that most motorists on the road consider safe and reasonable under ideal conditions.
- Posted Speed Limit (PSL) – the maximum legal speed limit posted on a section of highway using the regulatory sign.
- 7-day speed – the mean or 85%ile speed calculated over a 7-day period (24hrs per day).
- Average Weekday – the sum of the total weekday traffic flows divided by the number of surveyed weekdays .
- Average Weekend – the sum of the total weekend traffic flows divided by the number of surveyed weekend days.

The remainder of this report is structured as follows:

- The Executive Summary provides a brief introduction and summary of the Study.
- Section One outlines the baseline conditions, including a summary of analysis of traffic speeds and collision statistics.
- Section Two summarises the identified issues relating to speeding vehicles.
- Section Three provides information on relevant policy and guidance.
- Section Four identifies potential intervention measures, including commentary on alignment with policy / guidance and next steps.

# Executive Summary

# Introduction

Understanding the issues and developing effective solutions for the town is a critical part of the Optimised Infrastructure Plan (OIP). Key stakeholders have emphasised the need to rapidly understand the current problems, their causes, and potential solutions. There is a need for both quick wins (to lock-in the benefits of the emergency road space reallocation) and long-term solutions to the problems faced in the town.

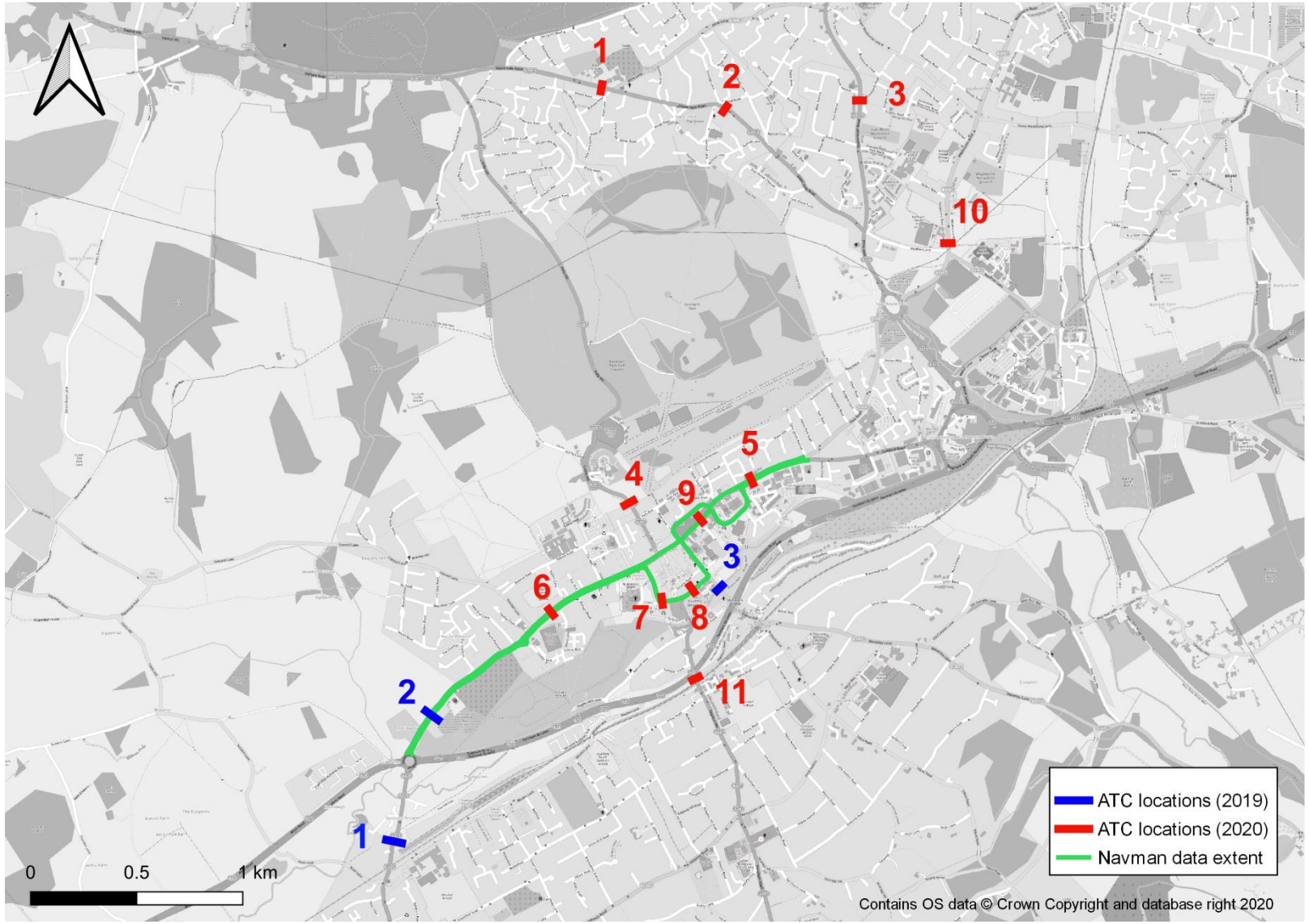
A particular perceived problem with speeding has been identified. As a critical issue to the success of the overall OIP, this study has been undertaken to understand issues caused by speeding vehicles in the town and identify how they might be addressed.

The study comprises:

- Review of data and evidence base.
- Identification of critical speed issues and, where possible, root causes.
- Identification of potential intervention measures, including commentary on alignment with policy / guidance and next steps.

# Data Reviewed

This map shows the location and extent of data reviewed as part of this Study. Further details of all data sources are provided in the following pages.



# Data Reviewed

| Data Source | Dataset | Age | Comments / Use of Data |
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| **iTransport data** | Automatic Traffic Counts (ATCs) | 2019 | ATCs conducted by Intelligent Data Collection in June and July 2019. This data is up-to-date but will not show implications of Covid-19. *Used to understand pre-Covid-19 pandemic traffic compositions and speeds.* |
| **Intelligent Data Collection** | Automatic Traffic Counts (ATCs) | 2020 | ATCs collected traffic flow and speed data from Monday 30th November 2020 to Thursday 10th December 2020 across 24 hours. *Used to understand post-Covid-19 pandemic traffic compositions and speeds.* |
| **Surrey County Council** | Navman average speed data | 2019 | Navman average speed data for September 2019. This data represents pre-Covid-19 speeds on the A325 between Guildford Road and Coxbridge Roundabout. The data includes average freeflow speeds on the A325 between 08:00-09:00, 10:00-16:00 and 17:00-18:00 in September 2019. *Used to understand and identify locations for further speed surveys.* |
| **Waverley Air Quality 2020 Report** | Maps of AQMAs<br>Details of automatic and non-automatic monitoring sites<br>Mean NO2 & PM10 monitoring results | 2020 | A measure to encourage walking by implementing a pedestrian crossing on A287 Firgrove Hill is in process of being implemented. Currently this has included a speed limit reduction from 50mph to 40mph being implemented on the A287 Hindhead Road towards Haslemere. |
| **Collision Statistics** | STATS19<br>SCC Data | 2017 - 2020 | Provides point-based locations of collisions and their associated characteristics (circumstances, vehicle types and casualties). *Used to understand any collision trends between 2017 and 2020 inclusive.* |
| **Various** | Anecdotal evidence and written representations | 2020 | Written representations provided, including commentary on issues experienced in the town and local area. *Used to understand local conditions / issues and to input into interventions long list.* |

# Anecdotal evidence (highlighted by local Councillors and on-site observations)

**Speeding**

Excessive speeding has been highlighted on:

- Upper Hale Road, in particular East of Folly Hill and West of Farnborough Road.
- Farnborough Road, in particular north of Upper Hale Road.
- West Street.
- A325 Wrecclesham Hill.
- Weybourne Road, east of the Six Bells Roundabout.

**20mph Zones**

- There is local support for a 20mph speed limit within the Town Centre, including from pedestrians and cyclists.
- Provide 20mph speed limits at principle crossing points for local schools.
- Provide 20mph school zones on the A325 (Heath End Secondary School and William Cobbett Primary / All Hallows pupils crossing) and A3016 (Hale Primary School).

**Safety**

- There have been near misses with children crossing the road outside The Plough Pub and Mead Lane.
- Pupils from four local schools must cross the A325 and A3016.
- Narrow footways through Upper Hale cause safety concerns.

**Other Measures**

- Traffic calming measures outside The Plough Pub.
- Traffic calming and increased signage (place signs and road painting) on Upper Hale Road and Farnborough Road.
- Treatment on the A325 through Heath End and Upper Hale Road, including:
  - *New and additional 30mph signs and on-road painted speed limits.*
  - *Better Village Entry signage / gateway signs on entry to Hale and Heath End.*
  - *Improved crossing for local schools / school signs.*

# Traffic Composition

Analysis of traffic volume data has been undertaken to understand baseline conditions before and during the Covid-19 pandemic:

Analysis of this data has been undertaken to understand the composition of traffic recorded and whether it could affect the speeds recorded (e.g., a significant proportion of Heavy Goods Vehicles, or cyclists).

In summary:

- The majority of vehicles recorded at all sites were “lights”, comprising cars and Light Goods Vehicles (LGVs).
- In 2020, a significant proportion of “lights” were cars. In 2019 recorded “lights” were split more evenly between cars and LGVs.
- Cyclists, Motorcyclists, Heavy Goods Vehicles (HGVs) and Buses make up a small proportion of traffic recorded at any of the sites.
- It is not considered that the vehicle compositions would affect the speeds recorded, or any conclusions drawn in this Study.

# Traffic Speed Survey Summary

Analysis of speed data has been undertaken to understand baseline conditions pre- and post-Covid-19 pandemic:

- Navman average speed data supplied by Surrey County Council. This data represents pre-Covid-19 speeds on the A325 between Guildford Road and Coxbridge Roundabout. The data includes average free-flow speeds on the A325 between 08:00-09:00, 10:00-16:00 and 17:00-18:00 in September 2019.
- i-Transport Automatic Traffic Count (ATC) data collected in June 2019. This data represents pre-Covid-19 speeds on Wrecclesham Road, West Street and South Street. The data includes hourly mean and 85%ile* speeds for eight days.
- 2020 Automatic Traffic Count (ATC) data collected in December 2020. This data represents post-Covid-19 speeds at locations around Farnham town centre** and the surrounds (including Upper Hale, Heath End and Weybourne Road). The data includes hourly mean and 85%ile* speeds for ten days.

Analysis of the Navman data and anecdotal evidence was used to identify the locations of the 2020 ATCs. Further analysis of each of the datasets has been undertaken to understand the average and 85%ile* speeds of traffic within the wider area (i-transport data and 2020 ATCs) and town (Navman data and ATC data).

** The 85$^{th}$ percentile (85%ile) speed is the speed at or below which 85% of motorists were recorded driving on the given road. It can indicate the speed that most motorists on the road consider safe and reasonable under ideal conditions.*

*** It is worth nothing that due to the pandemic, there is currently some widening of footways with barriers which is taking up some of the roadspace and may contribute to reduced speeds*.

# Traffic Speed Survey Summary

**Town Centre**

- Overall, the maximum 7-day mean speed was less than 24mph at all of the town centre survey locations.
- On Downing Street (Site 7) and East Street (Site 9) the 7-day mean and 85%ile speeds were consistently recorded as under the 30mph Posted Speed Limit (PSL).
- On Union Road (Site 8), 7-day mean speeds were consistently recorded under the 30mph PSL, although 7-day 85%ile speeds were recorded as slightly over during night-time periods.

**Town Centre Approaches**

- Overall, the maximum 7-day mean speed was less than 24mph on West Street (Site 6), Firgrove Hill (Site 11) and South Street (Site 3 2019) .
- On Castle Street (Site 4), 7-day mean speeds recorded were typically under the 30mph PSL for traffic travelling in both directions. However, the data indicates that, typically, traffic speeds up as it leaves the town centre, which may be linked to the general change in character of the road to the north and associated increase in PSL to 40mph (c. 500m north of the ATC location).
- On East Street (Site 5), 7-day mean and 85%ile speeds recorded were typically under the 30mph PSL for traffic travelling westbound. However, the data indicates that, typically, traffic speeds up as it leaves the town centre one-way-system.

# Traffic Speed Survey Summary

**Upper Hale Road**

- Overall, the 7-day mean speed was less than 24mph close to Hale School (Site 1) and the 7-day 85%ile speed was below the 30mph PSL.
- South of Wood Road (Site 2), 7-day mean speeds were slightly higher (but below the 30mph PSL). However, the 7-day 85%ile speeds were consistently recorded as over the 30mph PSL, and up to 35mph between 17:00 and 07:00 in both directions. This may be linked to the general character of the road in this location, which is straight with good visibility in both directions.

**Heath End & Weybourne Road**

- On Farnborough Road (Site 3), 7-day mean speeds recorded were typically at or over the 30mph PSL for traffic travelling in both directions. The data indicates persistent speeds above the 30mph PSL in both directions, particularly during the night.
- On Weybourne Road (Site 10), 7-day mean and 85%ile speeds recorded were typically at or under the 30mph PSL in both directions between 07:00 and 17:00, but over the 30mph PSL outside of this period - reaching over 35mph in both directions during the overnight period. The data indicates persistent speeds above the 30mph PSL in both directions, particularly during the night.

# Traffic Speed Survey Summary

**Coxbridge Roundabout Approaches**

- In both directions on Wrecclesham Road (Site 1 2019), the mean speeds were consistently recorded at or below the 30mph PSL on weekdays, and over the 30mph PSL on weekends. The 85%ile speeds were recorded at between 33mph and 36mph in both directions.
- In both directions on West Street, north of Coxbridge Roundabout (Site 2 2019), the mean speeds were consistently recorded above the 30mph PSL. The 85%ile speeds were recorded consistently over 35mph.
- The data indicates persistent speeds above the 30mph PSL in both directions. This may be indicative of the nature of the adjoining A31, which has a PSL of 70mph in this location.

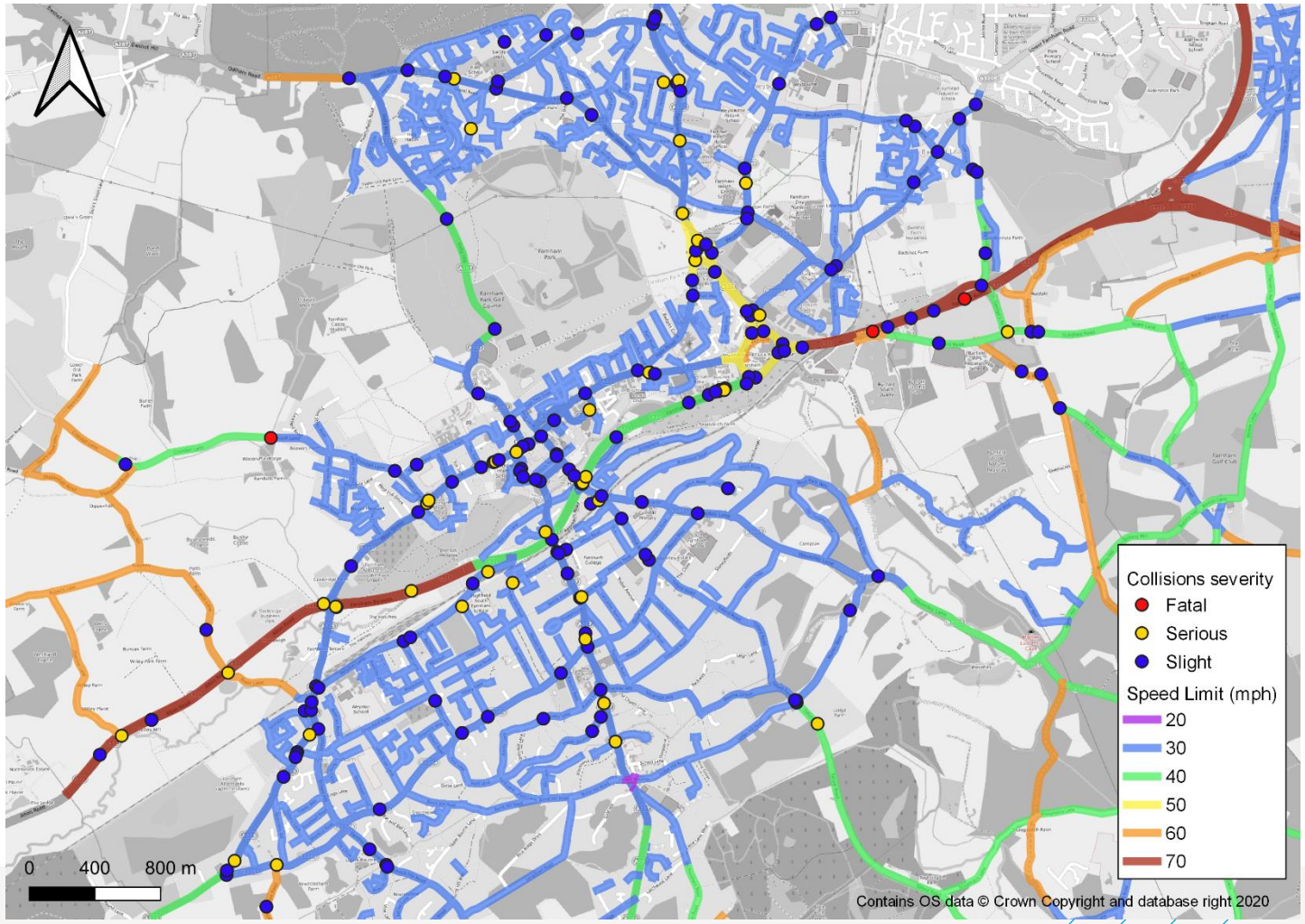
# Collision Analysis (2017-2020)

Data on collisions resulting in injuries recorded in Farnham and Upper Hale has been provided by the SCC Road Safety Team, for between 01/10/2017 and 30/09/2020.

The map shows the locations of all collisions resulting in injuries in Farnham and the surrounds in the context of the PSLs.

The data indicates that a total of 104 collisions were recorded over the three-year period. Few of the collisions resulted in fatal injuries, with the majority resulting in a slight or serious injury.

The data has been further analysed to identify collisions with speed listed as a causation factor. No prominent link between speed and collisions in any one area has been found.



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# Issues Identified

**Town Centre**

- There is local support for a 20mph speed limit within the Town Centre, including from pedestrians and cyclists. The speed survey data indicates that within the town centre itself speeds are generally low, with 7-day mean speeds of less than 24mph.
- On approach to the town centre, speeds are generally low to / from the south and west. Firgrove Hill, West Street and South Street all had recorded 7-day mean speeds of less than 24mph.
- Anecdotal evidence suggests there have been near misses with children crossing the road outside The Plough Pub and Mead Lane (West Street), and there is local desire for traffic calming measures outside the Plough Pub.
- Speeds were recorded to be typically low on approach to the town centre from the north (Castle Street) and east (East Street), with 7-day mean speeds at or less than 26mph. However, the data indicates that, typically, traffic speeds up as it leaves the town centre on these roads. On East Street it indicates that typically traffic speeds up as it leaves the town centre one-way-system. On Castle Street this may be linked to the general change in character of the road to the north and associated increase in PSL to 40mph (c. 500m north of the ATC location). With limited crossing facilities for pedestrians in this location, this could be a key safety concern.

# Issues Identified

**Upper Hale**

- Anecdotal evidence suggests speeding on Upper Hale Road, in particular East of Folly Hill and West of Farnborough Road.
- Pupils from four local schools must cross Upper Hale Road, and there is local desire for a 20mph school zone close for Hale Primary School / improved crossings and school signs.
- Narrow footways through Upper Hale cause safety concerns.
- The speed survey indicates that close to Hale School speeds are generally within the 30mph PSL during the day (with a 7-day mean of less than 24mph), however 85%ile speeds were recorded as higher between 17:00 and 07:00.
- South of Wood Road, 7-day mean speeds were slightly higher (but below the 30mph PSL) although the 7-day 85%ile speed was recorded as over the 30mph PSL and up to 35mph between 17:00 and 07:00. This may be linked to the general character of the road in this location, which is straight with good visibility in both directions.

# Issues Identified

**Heath End (A325 Farnborough Road)**

- Anecdotal evidence suggests speeding on Farnborough Road, in particular north of Upper Hale Road, and there has been local suggestion for traffic calming and increased signage (place signs and road painting).
- Pupils from four local schools must cross the A325, and there is local desire for a 20mph school zone for Heath End Secondary School and William Cobbett Primary / All Hallows pupils crossing).
- The speed survey data indicates persistent speeds above the 30mph PSL in both directions, particularly during the night.
- 7-day mean speeds recorded were typically at or over the 30mph PSL for traffic travelling in both directions. 7-day 85%ile speeds for traffic in both directions were also typically over 35mph, with 85%ile speeds reaching 45mph in the northbound direction during the night.
- With the exception of a small road sign for “Heath End” (located to the north of Rowhills) there is limited signage to advise drivers they are entering a village / residential area.

**Weybourne Road**

- Anecdotal evidence suggests speeding on Weybourne Road, east of the Six Bells Roundabout.
- The speed survey data indicates persistent speeds above the 30mph PSL in both directions, particularly during the night.
- 7-day mean and 85%ile speeds recorded were typically at or under the 30mph PSL in both directions between 07:00 and 17:00, but over the 30mph PSL outside of this period reaching over 35mph in both directions during the overnight period. The 7-day 85%ile speeds were consistently recorded as over the 30mph PSL in both directions in all time periods.

# Issues Identified

**A325 Wrecclesham Road (south of Coxbridge Roundabout)**

- Anecdotal evidence suggests speeding on the A325 Wrecclesham Hill.
- The speed survey data indicates that traffic typically travels at the 30mph PSL on Wrecclesham Road in both directions, although speeds are slightly higher (c. 33mph mean) during weekends. The 85%ile speeds were recorded at between 33mph and 36mph in both directions.
- This may be indicative of the nature of the adjoining A31, which has a PSL of 70mph in this location.

**West Street (north of Coxbridge Roundabout)**

- The speed survey data indicates persistent speeds above the 30mph PSL in both directions (c. 33 mph mean).
- 7-day 85%ile speeds for traffic in both directions were also typically over 35mph, with 85%ile speeds reaching 45mph in the northbound direction during the over-night period.
- This may be indicative of the nature of the adjoining A31, which has a PSL of 70mph in this location.

# Policy and Guidance

Prior to identification of potential mitigation measures, National and Local policies and guidance have been reviewed to understand the requirements for implementation of speed-related measures and the process which must be followed.

- Changing to a lower speed limit on its own will not necessarily be successful in significantly reducing the speed of traffic if the prevailing mean speeds are much higher than the proposed lower speed limit. There should be no expectation that the police would be able to provide regular enforcement if a speed limit is set too low, and Surrey Police do not support 20mph speed limits that are not generally self-enforcing.
- Speed limits should be considered as part of a package of measures to manage vehicle speeds and improve road safety. Changes to the highway layout may be required to encourage lower speeds, in addition to any change in speed limit.
- Where the mean speed is already **at or below 24mph** on a road, introducing a 20mph speed limit through signing alone is likely to lead to general compliance with the new speed limit.
- Where the existing mean speeds are **above 24mph** then a 20mph scheme with traffic calming measures (known as a 20mph zone) will be required.
- It is possible to implement 20mph schemes that consist of a combination of physical features (where existing speeds are high), and signs alone (where speeds are already low) on different sections of the same road.
- Department for Transport (DfT) regulations now allow the use of advisory “20 when lights show” with amber flashing lights on the approach to schools. However, the influence of these signs on vehicle speeds is likely to be minimal and is not enforceable as it is an advisory sign rather than a legal limit. Regulations do not permit amber flashing lights to be used on the approach to signal-controlled crossings or zebra crossings. SCC Highways will not support the use of mandatory variable 20mph speed limits, and it is their policy that there should always be an overall assessment of the safety issues outside a school to investigate and define the problem rather than consideration of the speed limit in isolation.

# Potential Interventions

Potential interventions have been developed to respond to the key issues identified, with due consideration of where:

- Speed survey data indicates there are existing issues with speeding.
- There is local support for lowered speed limits.
- Safety issues have been raised or identified.
- National and SCC guidance would support additional measures.
- There is an opportunity to compliment interventions to encourage an increase in walking and / or cycling and an associated reduction in pollutants / emissions.

Due to the nature of the study, potential interventions have been grouped by location and are summarised in the following pages. The priority of interventions and whether they are progressed will be dependent on local member support (in line with the policy and guidance outlined in Section 3).

# Potential Interventions

| Intervention | Description | Notes |
|---|---|---|
| **Town Centre** | 20mph limit | The speed survey data indicates that within the town centre itself speeds are generally low with 7-day mean speeds of less than 24mph, which would support a signed-only 20mph speed limit as appropriate. |
| **West Street Gateway** | 20mph limit with Gateway Feature | A “gateway” feature could be implemented drawing attention to the location of the school. This could help to create a sense of place when drivers enter the area by creating a visual impact and introducing drivers to the town. Gateway Signs could be one part of traffic calming measures. Department for Transport recommends using vertical elements (Gateway signs, speed limit signs, etc.) in conjunction with horizontal elements (build outs, pinch points, rumble devices, etc) to act as a speed reducing measure. |
| **East Street Traffic Calming** | 20mph limit with Traffic Calming | A signed-only 20mph limit may be appropriate for traffic travelling towards the town centre; however, traffic leaving the town centre would be likely to exceed a 20mph limit. Surrey Police does not support 20mph speed limits that are not generally self-enforcing, and therefore it is likely that a 20mph limit would need to be supported with traffic calming measures in this location. |
| **Castle Street** | 20mph with Gateway Feature | A “gateway” feature could be implemented drawing attention to the fact that drivers are entering the town. This could help to create a sense of place when drivers enter the area by creating a visual impact and introducing drivers to the town. Gateway Signs could be implemented in conjunction with physical traffic calming measures and complimentary horizontal elements (build outs, pinch points, rumble devices, etc) to act as speed reducing measures. |
| | Pedestrian Crossing | The provision of a crossing providing a link between Farnham Castle and Farnham Park to the wider pedestrian and cycle network. The location of a crossing and suitability of the intervention would need to be considered as part of a “whole package” which takes into account other objectives identified in the OIP for travel around the town centre. |
| **Folly Hill** | Speed Limit Reduction | In order to potentially reduce the speed limit, speed surveys will need to be undertaken to understand current mean and 85%ile speeds on this stretch, to inform whether a speed limit reduction would be suitable or if significant engineering measures would be required. |

# Potential Interventions

| Intervention | Description | Notes |
|---|---|---|
| **Upper Hale** | Signage Refresh in Upper Hale | A review and refresh of signage should be undertaken to ensure signage is located appropriately and is visible. The speed limit message could be reinforced with addition repeater signs and on-road painted speed limits. |
| | Gateway Treatment | Village Gateway Signs could be one part of traffic calming measures. DfT recommends using vertical elements (Village Gateway signs, speed limit signs, etc.) in conjunction with horizontal elements (build outs, pinch points, rumble devices, etc) to act as a speed reducing measure. |
| | Hale School Review | Should the school have specific safety concerns, a meeting should be held to discuss the concerns and education provision. SCC Sustainable Transport Team colleagues can advise the school if there are any gaps in provision and whether the school's travel plan needs to be updated. At this stage, the requirement for any physical interventions could also be raised. |
| | 20mph Speed Limit | There is local desire for a 20mph school zone close to Hale Primary School, as well as school signs and improved crossings for pupils from four local schools who must cross Upper Hale Road. Narrow footways through Upper Hale result in perceived safety concerns. |
| **Heath End (A325 Farnborough Road)** | Gateway Feature | Village Gateway Signs could be one part of traffic calming measures. Department for Transport recommends using vertical elements (Village Gateway signs, speed limit signs, etc.) in conjunction with horizontal elements (build outs, pinch points, rumble devices, etc) to act as a speed reducing measure. |
| **Weybourne Road** | Speed Cameras | The implementation of safety cameras could be effective at reducing vehicle speeds, particularly overnight. |
| **Coxbridge Roundabout Approaches** | Package of measures | Coxbridge Roundabout interventions are being investigated as part of the OIP. This will include consideration of interventions on all approaches. |

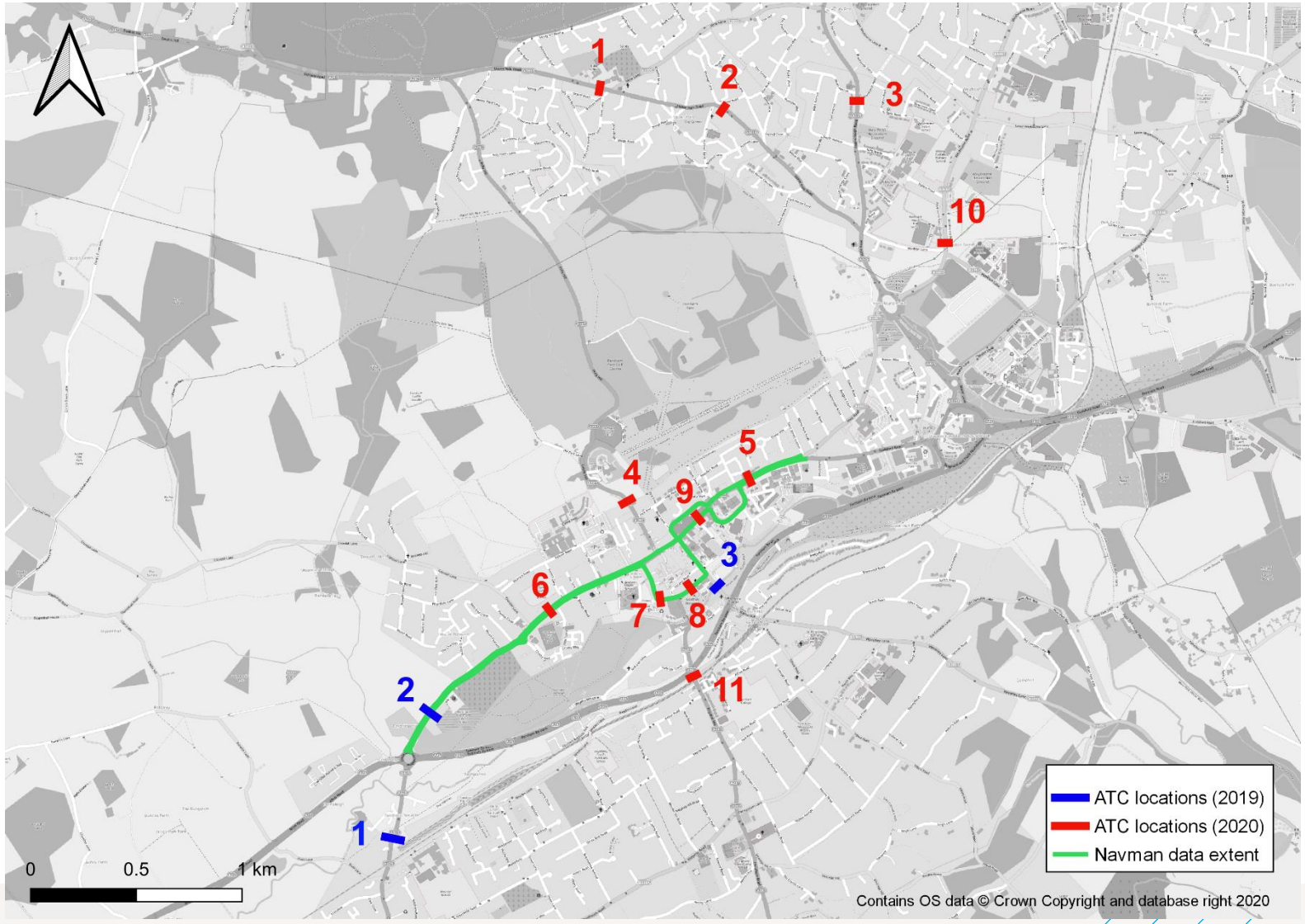
# Potential Interventions

| Intervention | Description | Short Term / Quick Wins | Longer Term |
|---|---|---|---|
| **Town Centre** | 20mph Zone | ✓ | |
| **West Street Gateway** | 20mph limit with Gateway Feature | ✓ | |
| **East Street Gateway** | 20mph limit with Traffic Calming | ✓ **(20mph speed reduction)** | Further assessment required for appropriate traffic calming measures |
| **Castle Street Gateway** | 20mph limit with Gateway Feature and Traffic Calming | ✓ **(20mph speed reduction)** | Further assessment required for appropriate traffic calming measures |
| | Pedestrian Crossing | | Further assessment required |
| **Folly Hill** | Speed Limit Reduction | | Further surveys required / to be considered as part of OIP |
| **Upper Hale** | Signage Refresh in Upper Hale | ✓ | |
| | Gateway Treatment | ✓ | |
| | Hale School Review | ✓ | Any potential interventions may require further surveys / assessment. |
| | 20mph Speed Limit | | Further assessment required. Extensive liaison with SCC Highways and Surrey Police required |
| **Heath End (A325 Farnborough Road)** | Gateway Feature | ✓ | |
| **Weybourne Road** | Speed Cameras | | Further assessment required |
| **Coxbridge Roundabout Approaches** | Package of measures | | To be considered as part of OIP |

# 1. Baseline Conditions

# Introduction

- The map shows the location and extent of data collected for this review. Further details of all data sources are provided in the following pages.
- Data collected includes:
  - *i-Transport Automatic Traffic Counts undertaken in 2019 (pre-Covid-19).*
  - *Automatic Traffic Counts undertaken to support this study in 2020 (post-Covid-19).*
  - *Navman average speed data supplied by Surrey County Council (2019).*



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- Farnborough Road, in particular north of Upper Hale Road;
- West Street;
- A325 Wrecclesham Hill; and
- Weybourne Road, east of the Six Bells Roundabout.

**20mph Zones**

- There is local support for a 20mph speed limit within the Town Centre, including from pedestrians and cyclists;
- Provide 20mph speed limits at principle crossing points for local schools; and
- Provide 20mph school zones on the A325 (Heath End Secondary School and William Cobbett Primary / All Hallows pupils crossing) and A3016 (Hale Primary School).

**Safety**

- There have been near misses with children crossing the road outside The Plough Pub and Mead Lane;
- Pupils from four local schools must cross the A325 and A3016; and
- Narrow footways through Upper Hale cause safety concerns.

**Other Measures**

- Traffic calming measures outside The Plough Pub; and
- Traffic calming and increased signage (place signs and road painting) on Upper Hale Road and Farnborough Road;
- Treatment on the A325 through Heath End and Upper Hale Road, including:
  - *New and additional 30mph signs and on-road painted speed limits;*
  - *Better Village Entry signage / gateway signs on entry to Hale and Heath End; and*
  - *Improved crossing for local schools / school signs.*

# Potters Gate Primary School Highway Improvements

Velocity Transport Planning prepared a report in June 2017 to address outstanding planning Condition 3 related to the expansion of Potters Gate Primary School in Farnham (ref. WA/2012/0695), and the high-level measures proposed in the 2012 School Travel Plan. Condition 3 required a post implementation assessment to be undertaken to identify whether a series of highway improvements were necessary to address any highway safety risks that had been exacerbated by the expansion of the school.

A series of improvement measures were implemented before September 2019; these measures primarily focused on the area around the UCA access road, Falkner Road and Potters Gate.

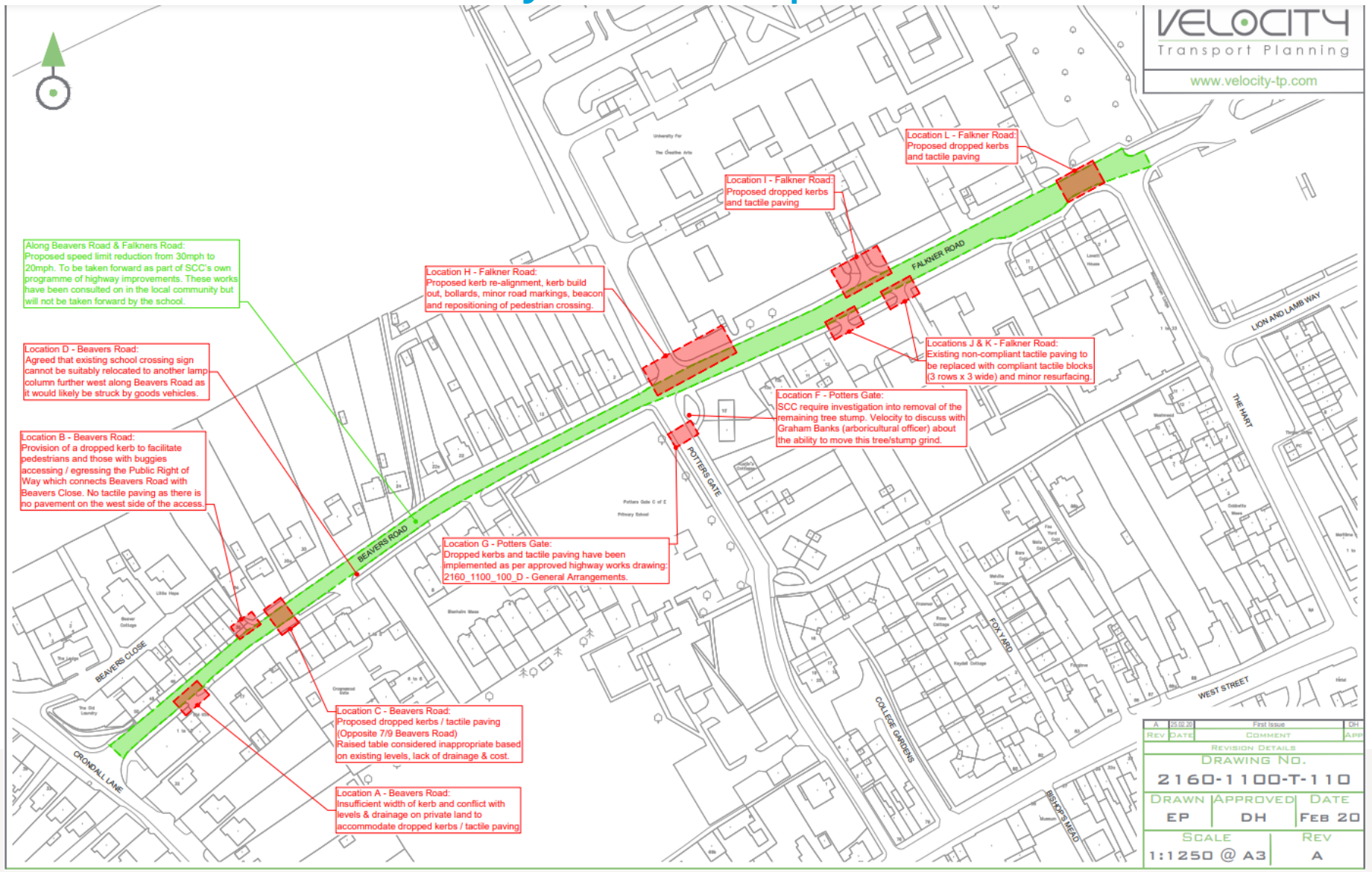
The technical note prepared by Velocity also reviewed baseline data and concluded that there are no significant highway safety issues from the perspective of 1) changes in pupil / staff travel demand at Potters Gate School since the original 2012 consent, 2) changes in localised traffic flow, 3) evidence of vehicle speeds, and 4) evidence of recorded accident history that would warrant local highway improvements over and above that proposed as part of the discharge of Condition 3.

Nonetheless, in order to further consider concerns raised by members, the propensity for further highway improvements has been assessed via a series of site visits and meetings between Velocity and SCC. These were undertaken between September 2019 and January 2020 with various departments within SCC.

A new package of measures has been finalised and proposed as preliminary designs and which are included on the next page. The plan shows the proposed additional highway works (now referenced as locations B, C, F, H, I, J, K & L), those already delivered (location G), those works that cannot be implemented for the reasons described (locations A & D), and the improvement works to be taken forward by SCC (the measure highlighted in green - location E).

Upon re-consultation at committee, assuming no objection is raised, these proposals will be subject to detailed design based on a topographical survey, and review of the presence of underlying utilities

# Potters Gate Primary School Speed Measures



# 1.1 Traffic Composition

# Introduction

Analysis of traffic volume data has been undertaken to understand baseline conditions before and during the Covid-19 pandemic:

- i-Transport Automatic Traffic Count (ATC) data collected in June and July 2019. This data represents conditions pre-Covid-19.
- Intelligent Data ATC data collected in December 2020. This data represents conditions post-Covid-19.

The data represents post-Covid-19 traffic composition in the Town Centre and the surrounds (including Upper Hale, Heath End and Weybourne Road), and pre-Covid-19 composition on Wrecclesham Road (south of Coxbridge Roundabout), West Street (north of Coxbridge Roundabout) and South Street.

Analysis of this data has been undertaken to understand the composition of traffic recorded and whether it could affect the speeds recorded (e.g., a significant proportion of LGVs, HGVs, or cyclists).

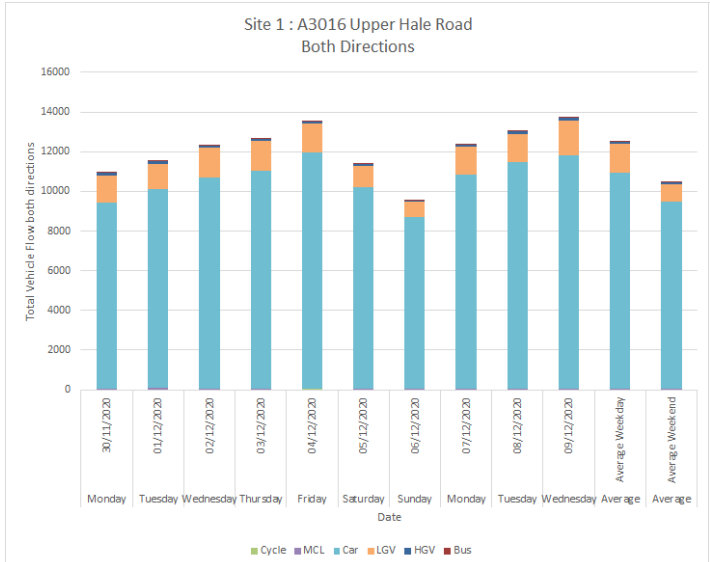
The graphs on the following pages illustrate the recorded traffic compositions at each ATC site.

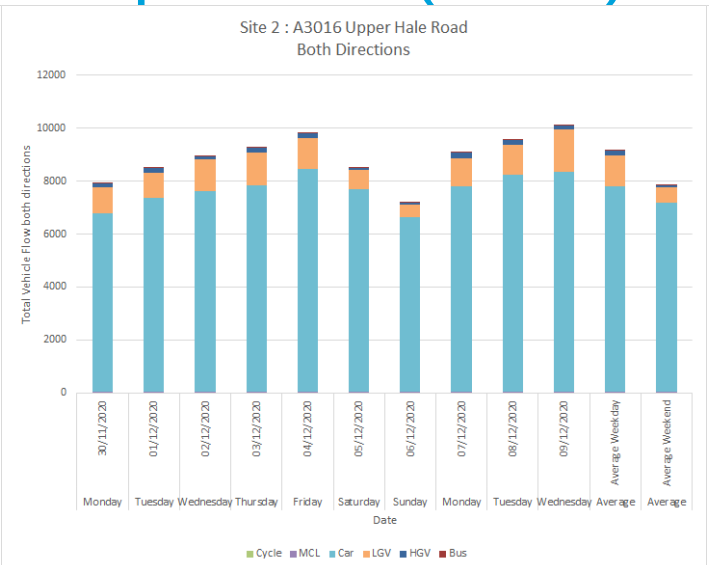
In summary:

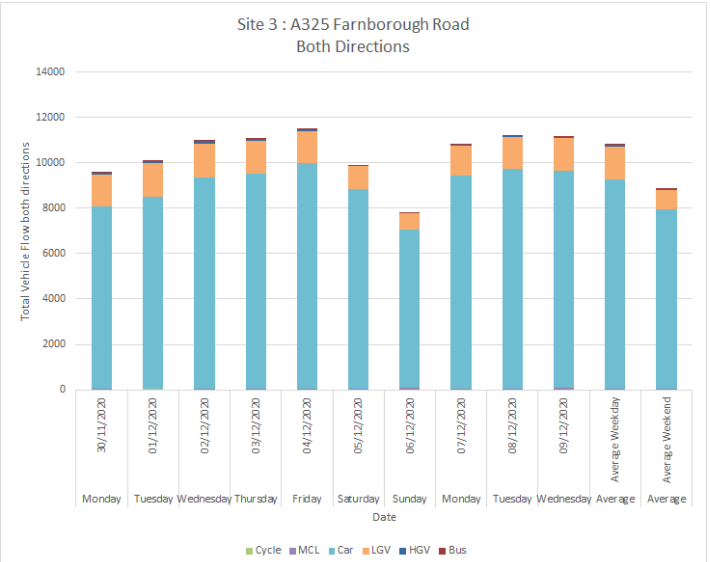
- The majority of vehicles recorded at all sites were “lights”, comprising cars and Light Goods Vehicles (LGVs).
- In 2020, a significant proportion of “lights” were cars. In 2019 recorded “lights” were split more evenly between cars and LGVs.
- Cyclists, Motorcyclists, Heavy Goods Vehicles (HGVs) and Buses make up a small proportion of traffic recorded at any of the sites.
- It is not considered that the vehicle compositions would affect the speeds recorded, or any conclusions drawn in this Study.

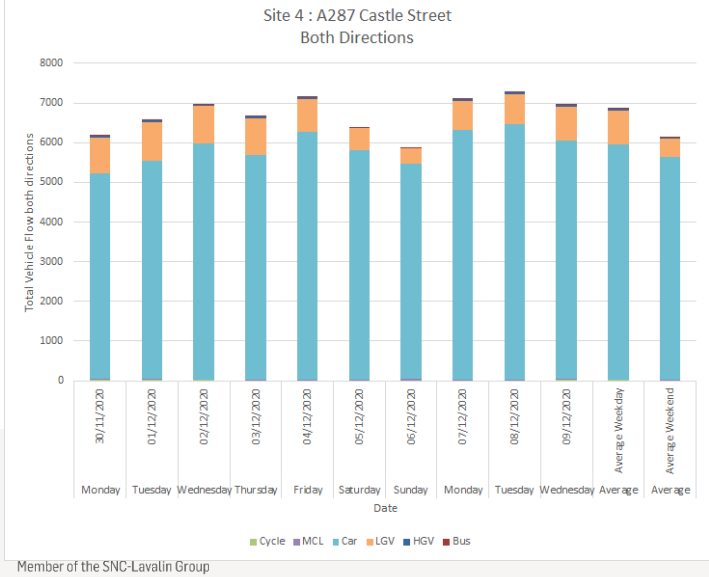
# ATC Data – Vehicle Composition (2020)

*Daily traffic volumes recorded by 2020 ATCs*



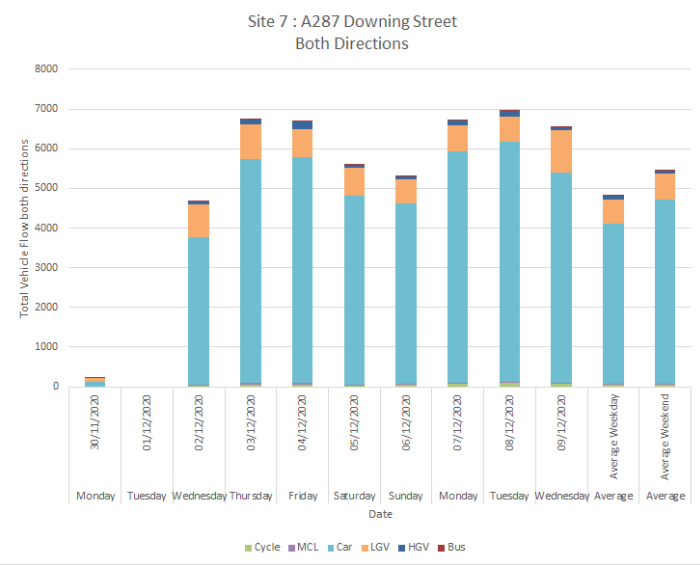



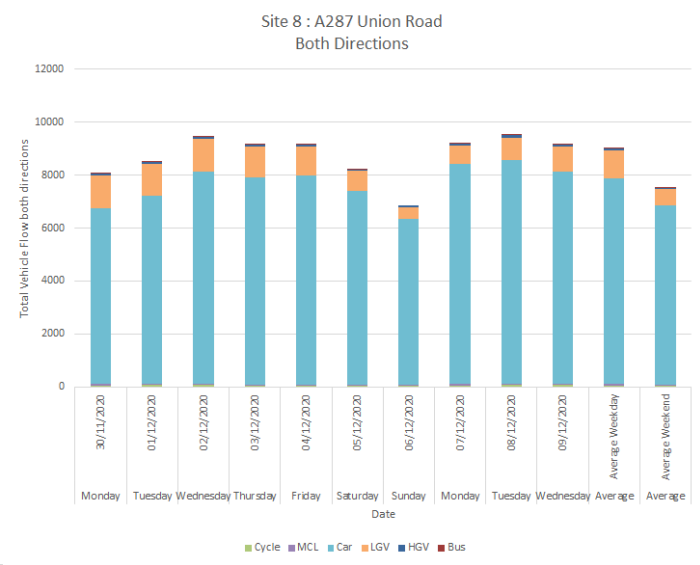



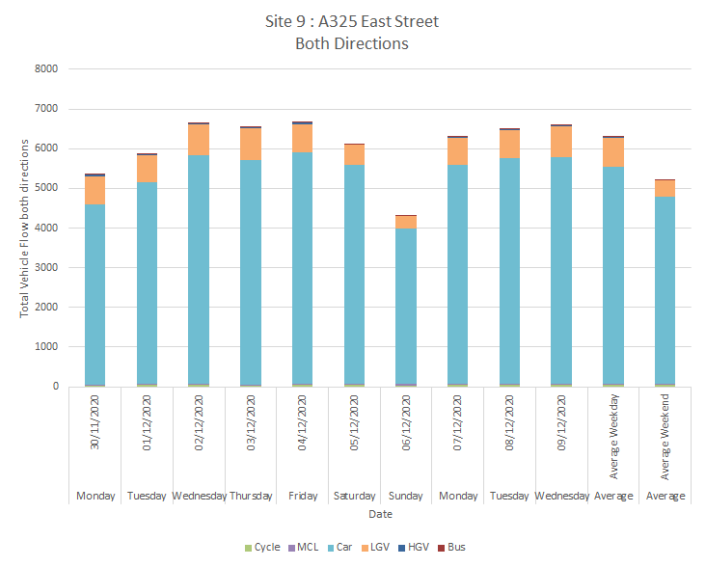


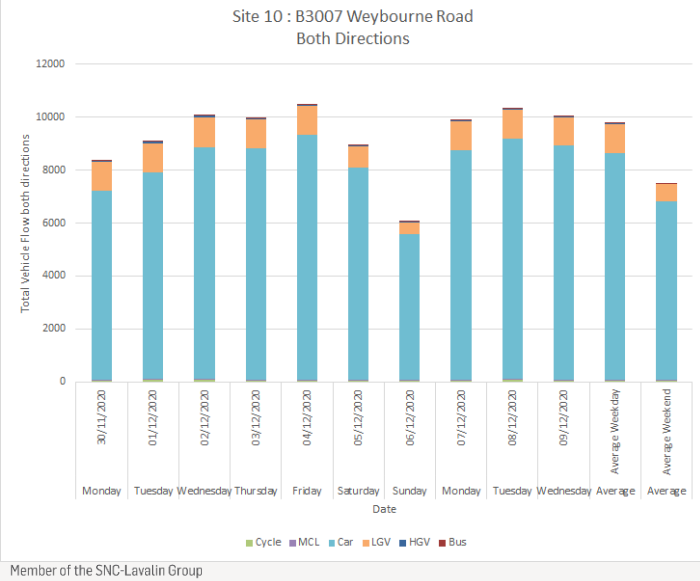
# ATC Data – Vehicle Composition (2020)

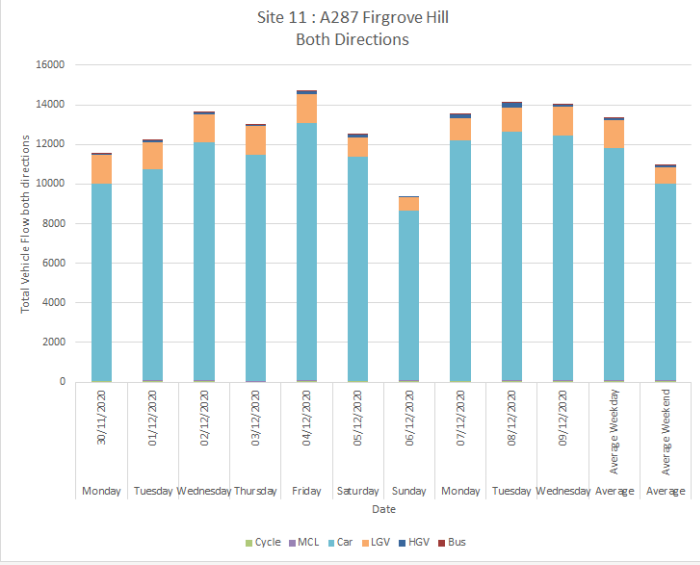
*Daily traffic volumes recorded by 2020 ATCs*



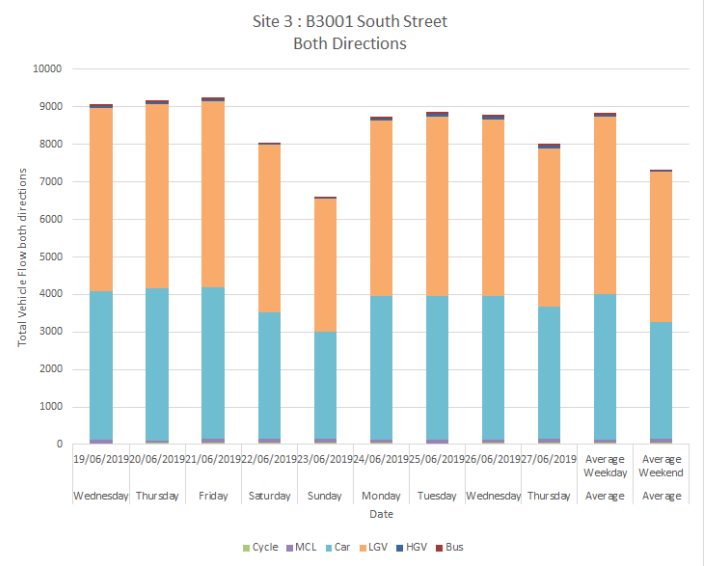



# ATC Data – Vehicle Composition (2019)

*Daily traffic volumes recorded by 2019 ATCs*





# 1.2 Traffic Speeds

# Introduction

Analysis of speed data has been undertaken to understand baseline conditions pre- and post-Covid-19 pandemic:

- Navman average speed data supplied by Surrey County Council. This data represents pre-Covid-19 speeds on the A325 between Guildford Road and Coxbridge Roundabout. The data includes average freeflow speeds on the A325 between 08:00-09:00, 10:00-16:00 and 17:00-18:00 in September 2019.
- i-Transport Automatic Traffic Count (ATC) data collected in June 2019. This data represents pre-Covid-19 speeds on Wrecclesham Road, West Street and South Street. The data includes hourly mean and 85%ile* speeds for eight days.
- 2020 Automatic Traffic Count (ATC) data collected in December 2020. This data represents post-Covid-19 speeds at locations around Farnham town centre** and the surrounds (including Upper Hale, Heath End and Weybourne Road). The data includes hourly mean and 85%ile* speeds for ten days.

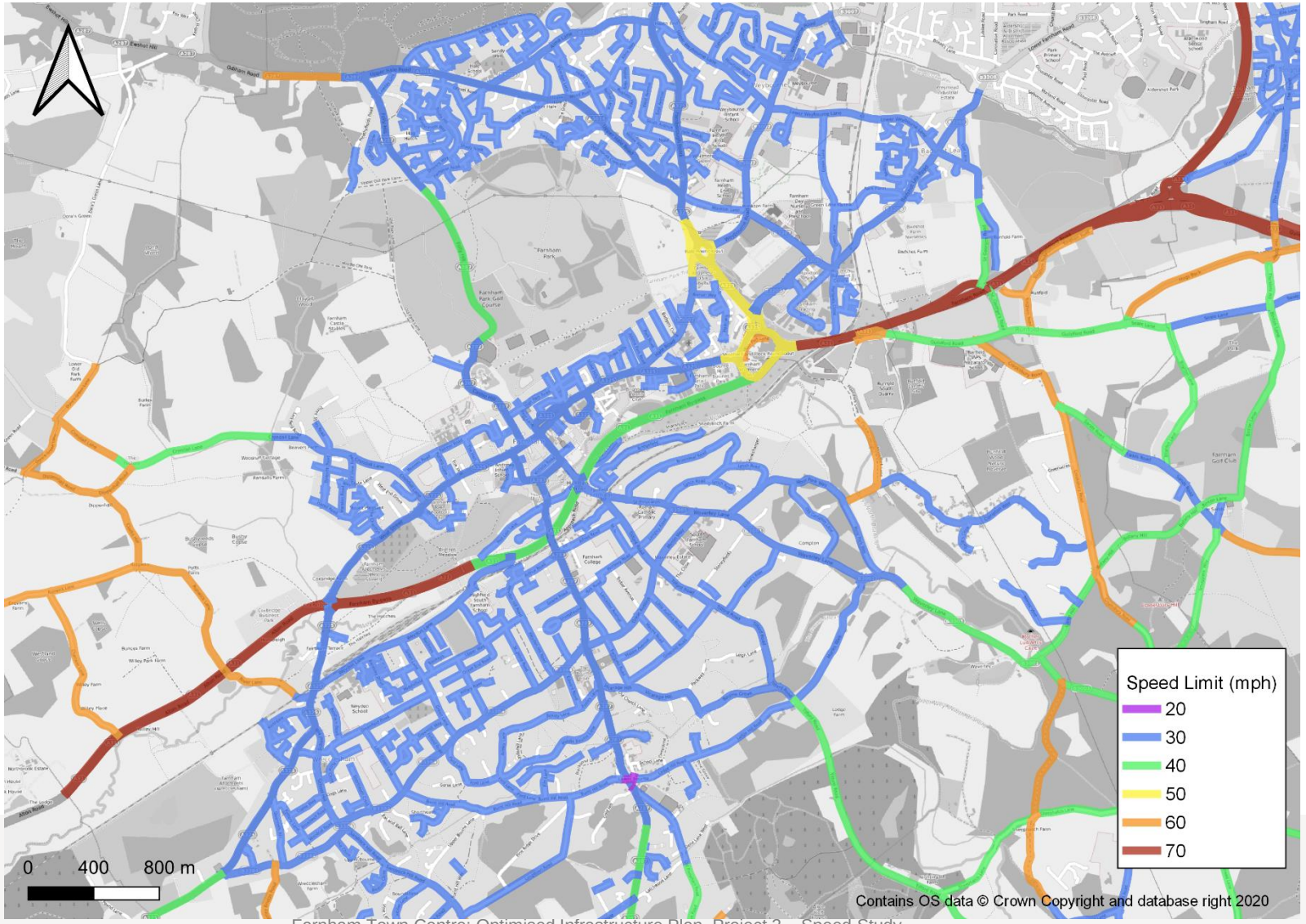
Analysis of the Navman data and anecdotal evidence was used to identify the locations of the 2020 ATCs. Further analysis of each of the datasets has been undertaken to understand the average and 85%ile* speeds of traffic within the wider area (i-Transport data and 2020 ATCs) and town centre (Navman data and ATC data).

The map on the following page indicates posted speed limits (PSLs) in the local area for reference.

** The 85$^{th}$ percentile (85%ile) speed is the speed at or below which 85% of motorists were recorded driving on the given road. It can indicate the speed that most motorists on the road consider safe and reasonable under ideal conditions.*

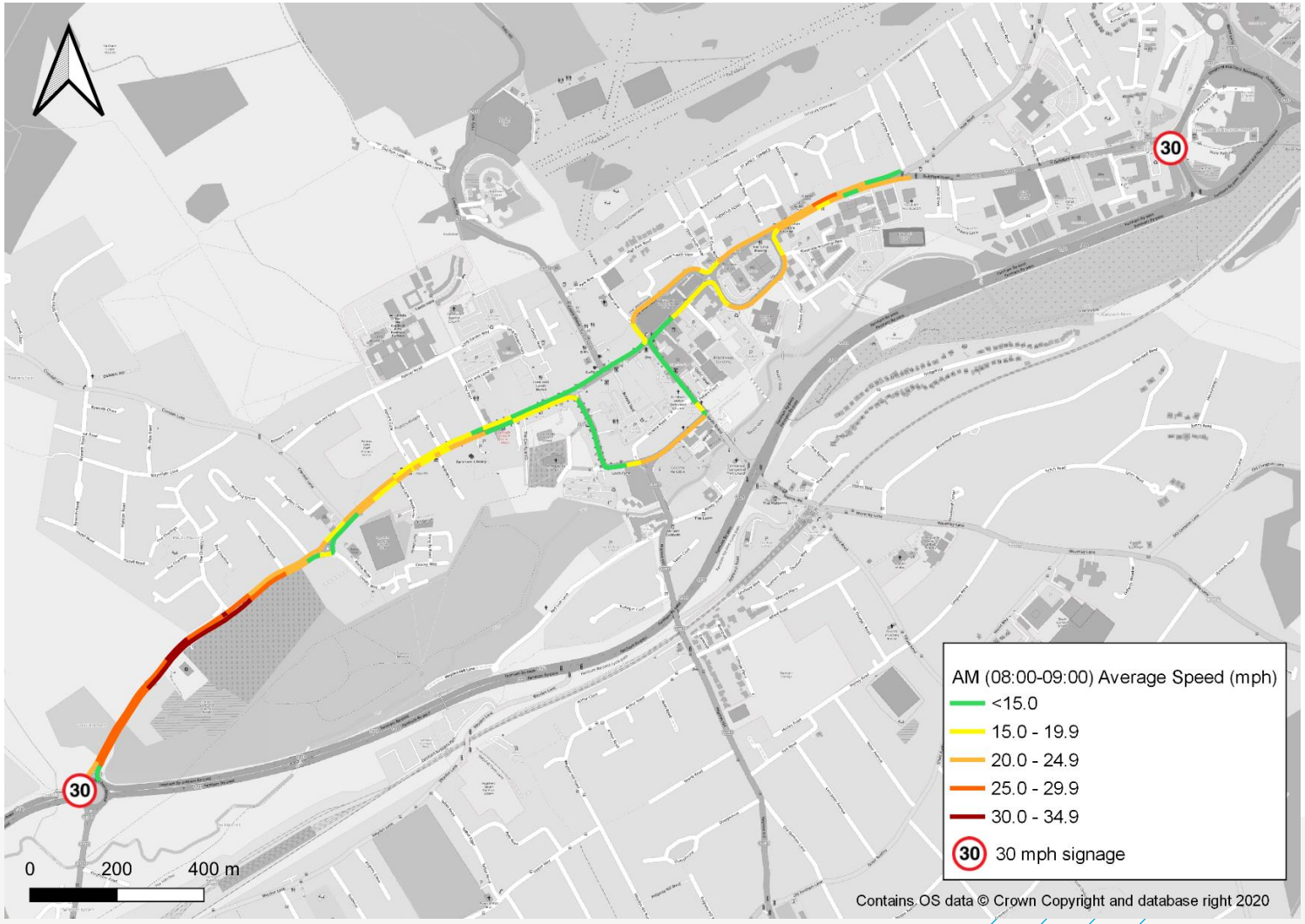
*** It is worth nothing that due to the pandemic, there is currently some widening of footways with barriers which is taking up some of the roadspace and may contribute to reduced speeds*.

# Posted Speed Limits



# A325 Average Speeds (Navman data) AM Peak 08:00-09:00

- The map shows average speeds in September 2019 between 08:00 and 09:00.
- The data indicates that average speeds in excess of 30mph (the posted speed limit) were recorded to the north of Coxbridge Roundabout).
- Between the Crosby Way Roundabout and the Town Centre speeds vary between 15mph and 24.9mph.
- Within the Town Centre speeds are generally 15mph or lower with Union Road slightly higher between 20mph and 24.9mph.
- Between Dogflud Way and Guildford Road, speeds range from 15mph and 24.9mph. Speeds along Woolmead road in the eastbound direction are higher than along the A325 in the westbound direction.



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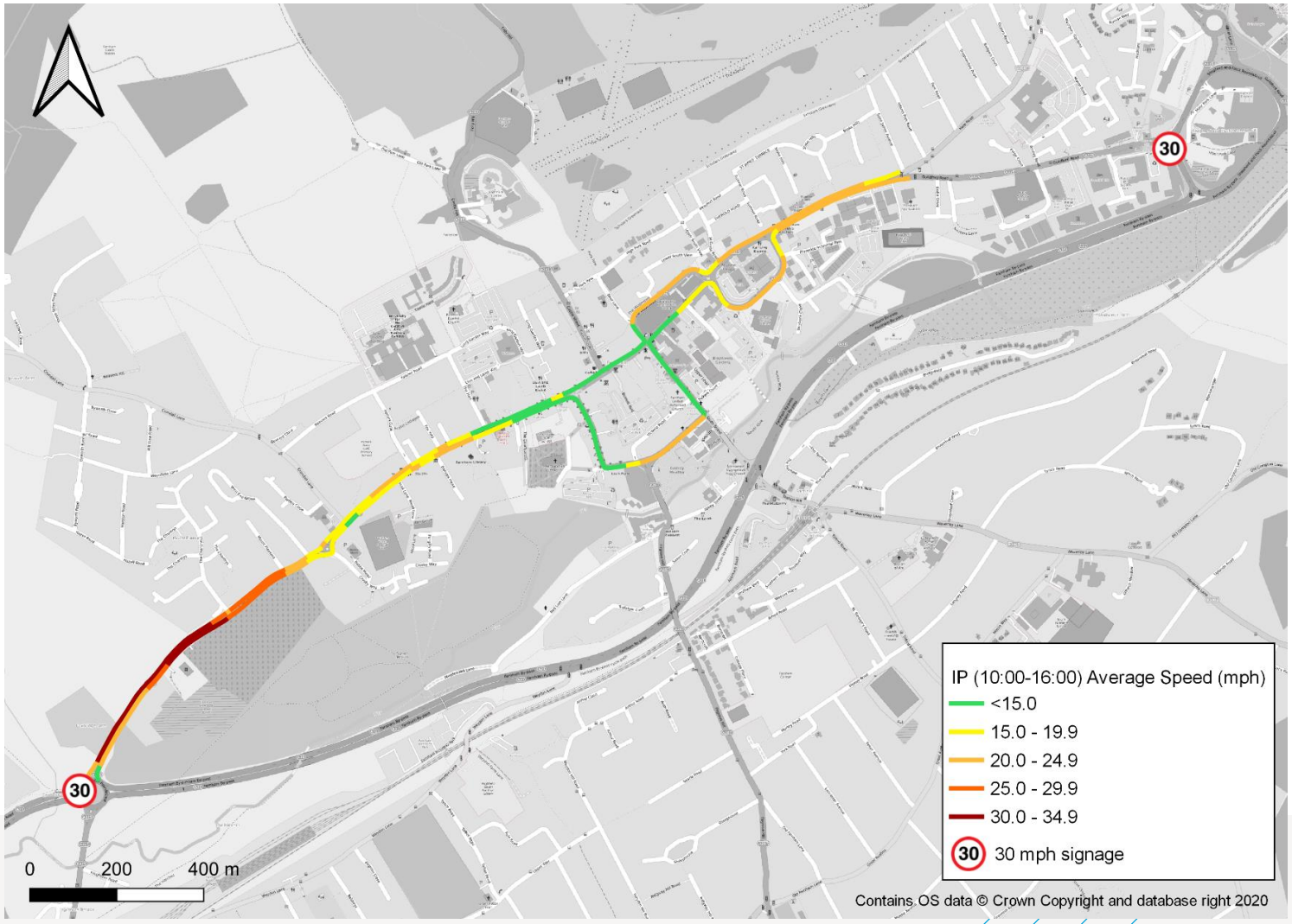
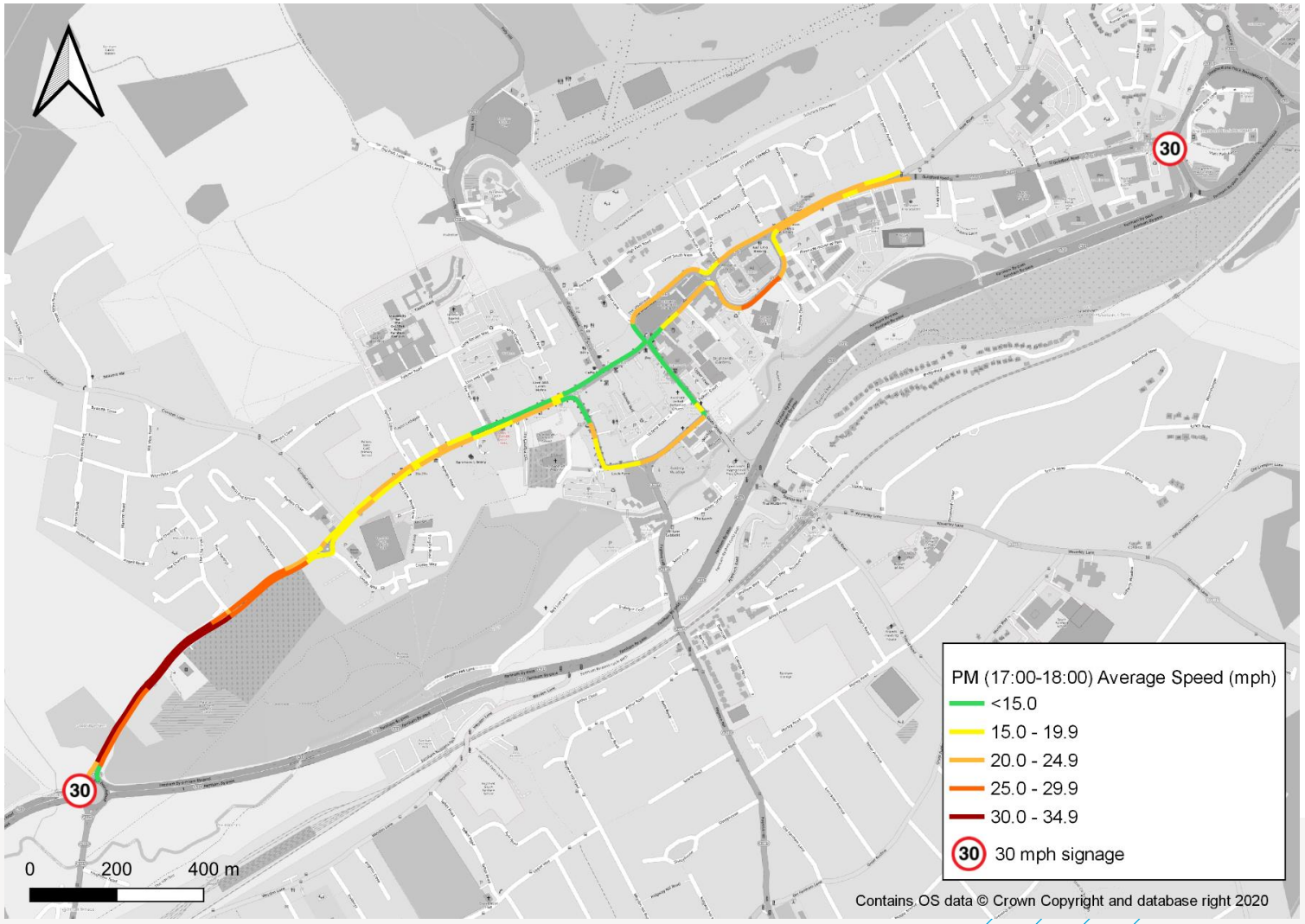
# A325 Average Speeds (Navman data) Inter-Peak 10:00-16:00

- The map shows average speeds in September 2019 between 10:00 and 16:00.
- The data indicates that average speeds in excess of 30mph (the posted speed limit) were recorded to the north of Coxbridge Roundabout).
- Between the Crosby Way Roundabout and the Town Centre, speeds are slightly higher with fewer average speeds below 15mph.
- Within the Town Centre speeds are lower compared to the AM peak with more links less than 15mph.
- Between Dogflud Way and Guildford Road, speeds are similar to the peaks, but are higher at the eastern end of the A325 by the East Street A325 / Guildford Road signalised junction.

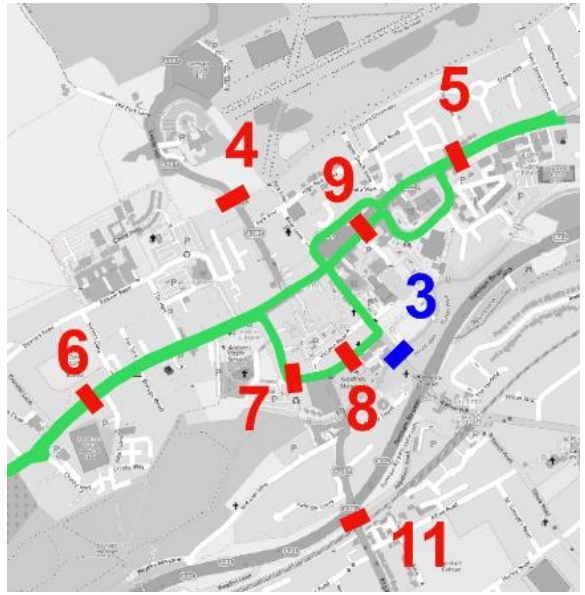


# A325 Average Speeds (Navman data) PM Peak 17:00-18:00

- The map shows average speeds in September 2019 between 17:00 and 18:00.
- The data indicates that average speeds in excess of 30mph the PSL (posted speed limit) were recorded to the north of Coxbridge Roundabout).
- Between the Crosby Way Roundabout and the Town Centre, speeds are below 24.9mph much the same as the AM Peak and Inter-Peak (IP).
- Within the Town Centre, Downing Way has slightly higher speeds than in the AM and IP.
- Between Dogflud Way and Guildford Road, average speeds are generally below 24.9mph. However, on Dogflud Way average speeds are between 25mph and 29.9mph, higher than both the AM and IP.



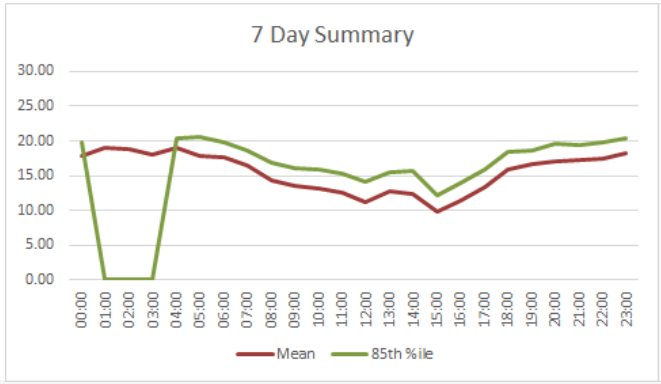
# Town Centre Speeds (ATC Data)



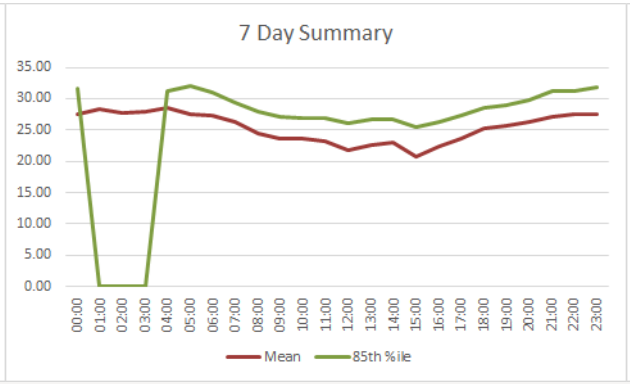

**Summary**

- ATC Sites 7, 8 and 9 (2020) recorded speeds within the Town Centre. The map shows their locations.
- Overall, the **maximum 7-day mean speed was less than 24mph at all of the locations** (shown in the below table).
- The graphs below summarise the 7-day mean and 85%ile speeds recorded by the 2020 ATCs by hour.
- **On Downing Street (Site 7) and East Street (Site 9) the 7-day mean and 85%ile speeds were consistently recorded as under the 30mph PSL.**
- **On Union Road (Site 8), 7-day mean speeds were consistently recorded under the 30mph PSL,** although 7-day 85%ile speeds were recorded as slightly over during night-time periods.

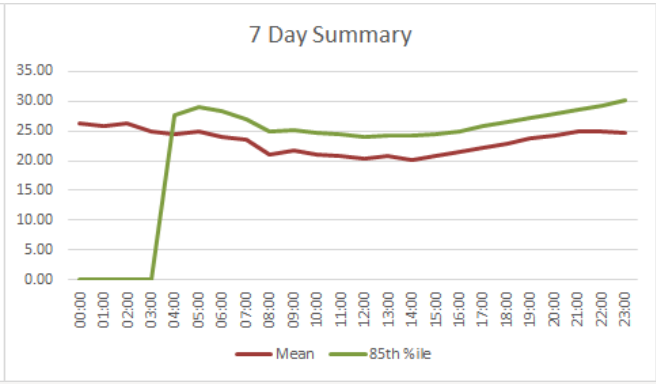





*Site 7 – 7-day Speed Summary recorded by 2020 ATC*




*Site 8 – 7-day Speed Summary recorded by 2020 ATC*

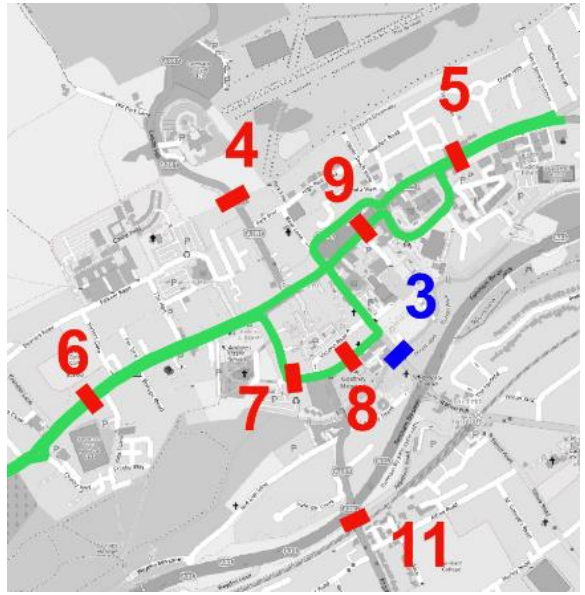



*Site 9 – 7-day Speed Summary recorded by 2020 ATC*

| Site | Mean (mph) | 85%ile (mph) |
|---|---|---|
| 7 | 14.66 | 18.15 |
| 8 | 23.86 | 27.84 |
| 9 | 21.64 | 25.58 |

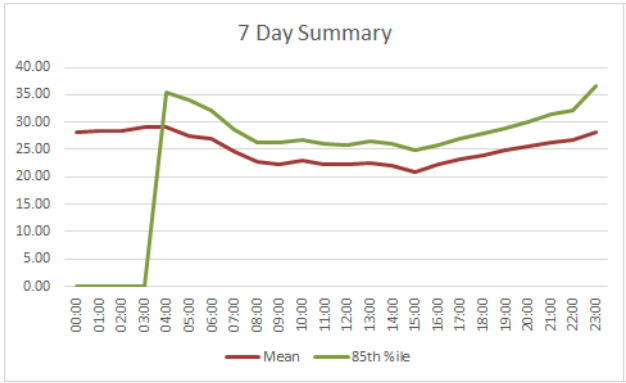
*7-day Mean and 85%ile Speed Summary (2020 ATC)*

# Town Centre Approaches Speeds (ATC Data)

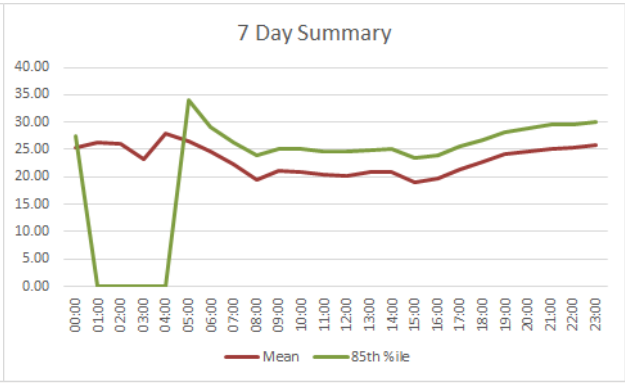



**Summary**

- ATC Sites 4, 5, 6, 11 (2020) and 3 (2019) recorded speeds on approach to the Town Centre. The map shows their locations.
- Overall, the maximum 7-day mean speed, shown in the below table, was less than 24mph on West Street (Site 6), Firgrove Hill (Site 11) and South Street (Site 3) . On South Street (Site 3), detailed speed data was not included in the 2019 counts, and therefore an approximate summary speeds have been estimated (see following page).
- At East Street (Site 5) and Castle Street (Site 4) the 7-day mean speeds were slightly higher (shown in the below table); further analysis has therefore been undertaken to understand any underlying trends (see following page).
- The graphs below summarise the 7-day mean and 85%ile speeds recorded by the 2020 ATCs by hour on West Street (Site 6) and Firgrove Hill (Site 11). At both locations, 7-day mean speeds were consistently recorded under the 30mph PSL, although 7-day 85%ile speeds were recorded at slightly over during night-time periods.




*Site 6 – 7-day Speed Summary recorded by 2020 ATC*

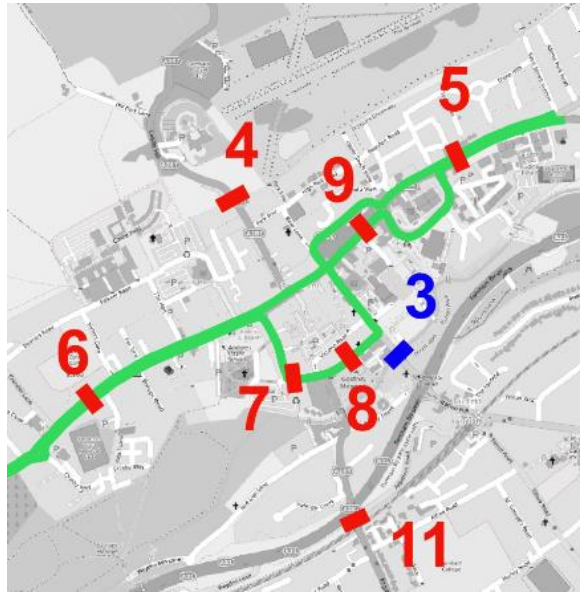



*Site 11 – 7-day Speed Summary recorded by 2020 ATC*

| Site | Mean (mph) | 85%ile (mph) |
|---|---|---|
| 3 2019 | c. 22 | c. 27 |
| 4 | 26.02 | 29.86 |
| 5 | 24.43 | 28.79 |
| 6 | 23.16 | 27.27 |
| 11 | 21.13 | 25.74 |

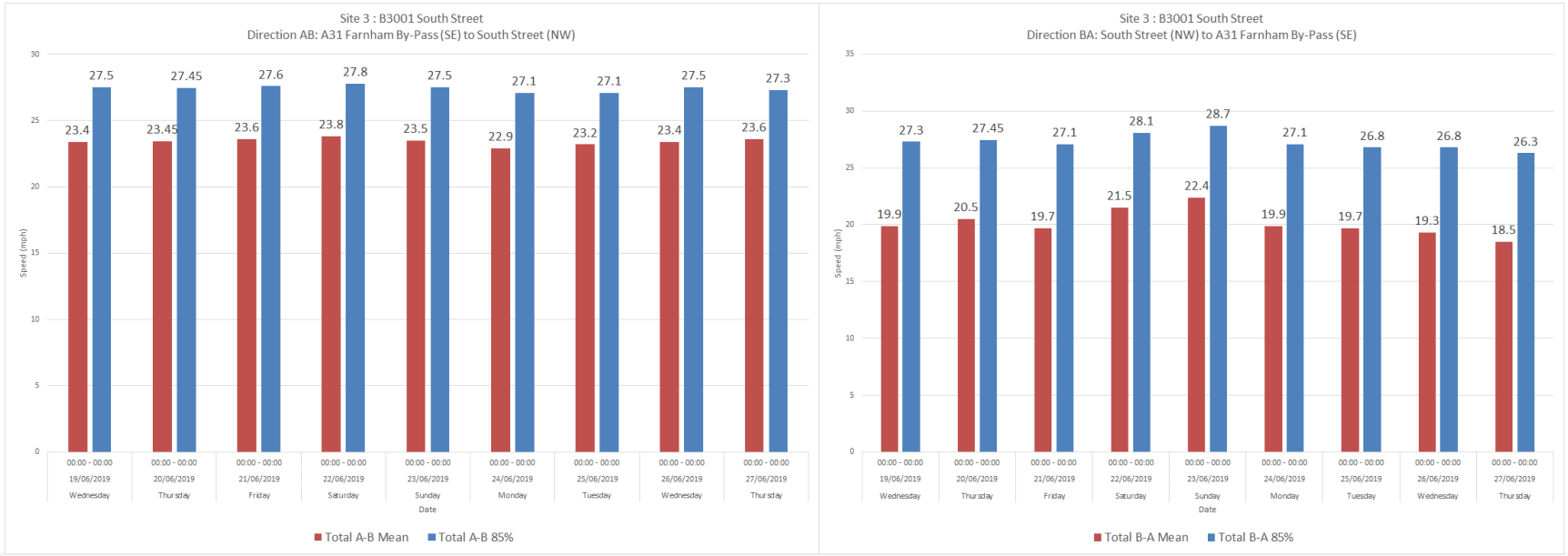
*7-day Mean and 85%ile Speed Summary (2020 ATC except 2019 at Site 3)*

# Town Centre Approaches Speeds (ATC Data)




**Speeds by direction**

- On South Street (Site 3), detailed speed data was not included in the 2019 counts and therefore mean and 85%ile speeds have been estimated at 22mph and 27mph respectively.
- The graphs below summarise the mean and 85%ile speeds by day in each direction. **In both directions, the mean speeds were consistently recorded under 24mph and 85%ile speeds under the 30mph PSL**.

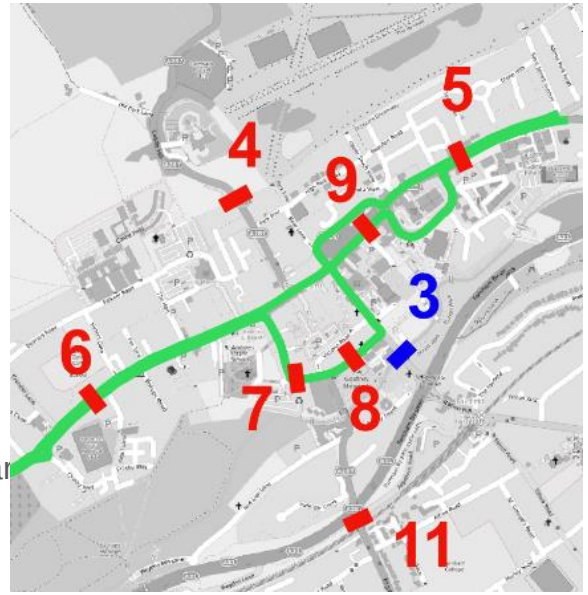



*Site 3 – Daily Speed Summary recorded by 2019 ATC (Northbound)*




*Site 3 – Daily Speed Summary recorded by 2019 ATC (Southbound)*

# Town Centre Approaches Speeds (ATC Data)




**Speeds by direction**

- Overall, the 7-day mean speed was recorded as 24.5mph on East Street (Site 5) and 26mph on Castle Street (Site 4). Further analysis has been undertaken to understand any underlying trends.
- 7-day mean and 85%ile speeds by direction (shown in the below table) indicate that 7-day mean and 85%ile speeds ar generally below the 30mph PSL for traffic travelling towards the town centre, with traffic leaving having higher speeds (85%ile speeds above the 30mph PSL at both locations).
- The graphs below summarise the 7-day mean and 85%ile speeds recorded by the 2020 ATCs by hour on Castle Street (Site 4) and East Street (Site 5). At both locations, 7-day mean speeds were consistently recorded at or under the 30mph PSL. The 7-day 85%ile speeds were recorded consistently over the 30mph PSL, particularly during night-time periods.
- The speed data has therefore been further analysed to understand underlying trends by time period and direction (see following page).


*Site 4 – 7-day Speed Summary recorded by 2020 ATC*

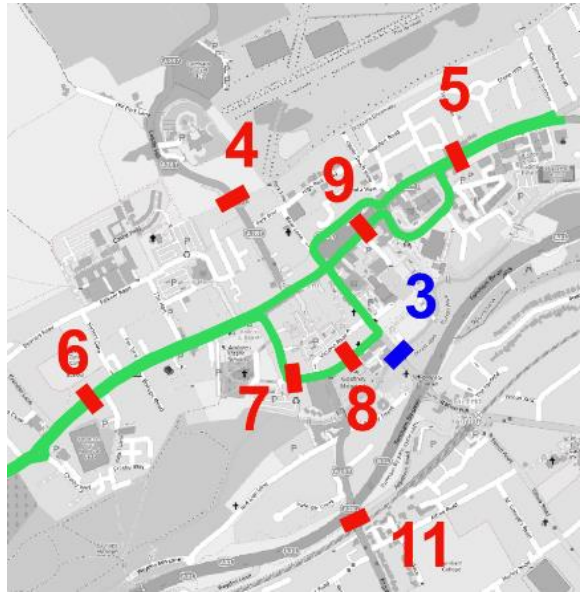



*Site 5 – 7-day Speed Summary recorded by 2020 ATC*

| Site | Mean (mph) | 85%ile (mph) |
|---|---|---|
| 4 NB | 27.61 | 31.43 |
| 4 SB | 24.43 | 28.30 |
| 5 EB | 26.06 | 31.08 |
| 5 WB | 22.80 | 26.50 |

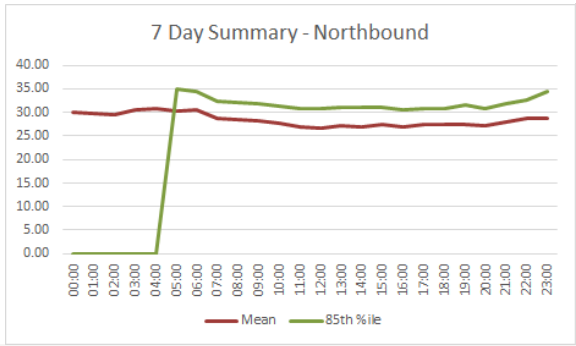
*7-day Mean and 85%ile Speed Summary by direction (2020 ATC)*

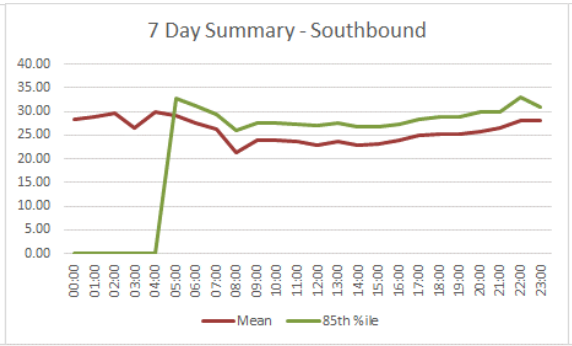
# Town Centre Approaches Speeds (ATC Data)



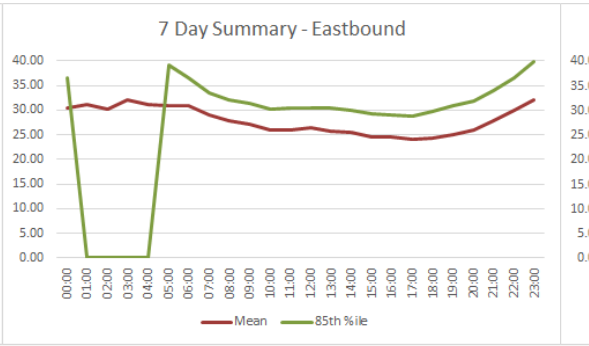

**Speeds by direction**

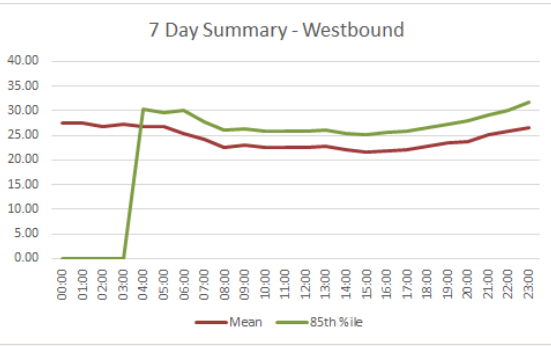
- The graphs below summarise the 7-day mean and 85%ile speeds recorded by the 2020 ATCs by hour on Castle Street (Site 4) and East Street (Site 5).
- On Castle Street (Site 4), 7-day mean speeds recorded were typically under the 30mph PSL for traffic travelling in both directions. 7-day 85%ile speeds for southbound traffic were also typically also under the 30mph PSL. The 85%ile speeds for northbound traffic were recorded consistently over the 30mph PSL. **This indicates that typically traffic speeds up as it leaves the town centre, which may be linked to the general change in character of the road to the north and associated increase in PSL to 40mph (c. 500m north of the ATC location).**
- On East Street (Site 5), 7-day mean and 85%ile speeds recorded were typically under the 30mph PSL for traffic travelling westbound. The 7-day mean speeds for eastbound traffic were recorded over the 30mph PSL during night-time periods, and the 7-day 85%ile speeds were consistently recorded as over. Similar to Castle Street, **this indicates that typically traffic speeds up as it leaves the town centre one-way-system.**



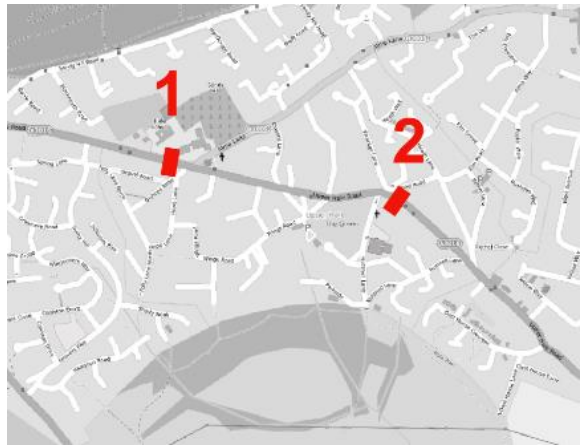

*Site 4 – 7-day Speed Summary recorded by 2020 ATC*



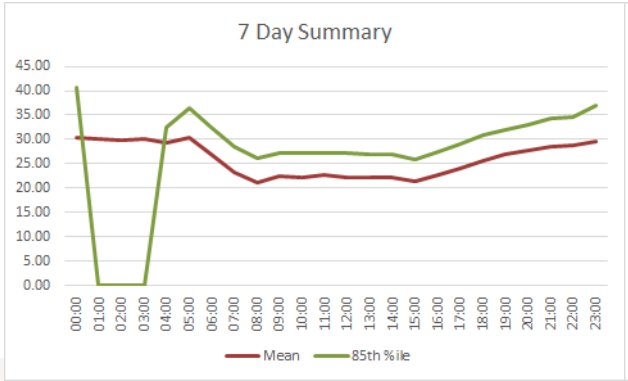

*Site 5 – 7-day Speed Summary recorded by 2020 ATC*

# Upper Hale Speeds (ATC Data)

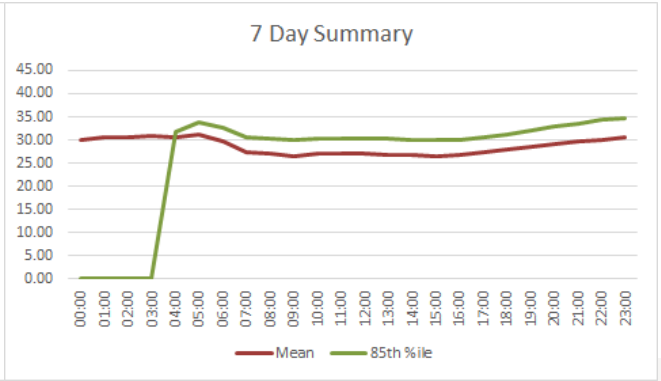



**Summary**

- ATC Sites 1 and 2 (2020) recorded speeds on the A3016 Upper Hale Road. The map shows their locations.
- Overall, the **7-day mean speed was less than 24mph close to Hale School** (Site 1) and the **7-day 85%ile speed was below the 30mph PSL**, shown in the below table. South of Wood Road (Site 2), 7-day mean speeds were slightly higher (but below the 30mph PSL) and the 7-day 85%ile speed over the 30mph PSL.
- The graphs below summarise the 7-day mean and 85%ile speeds recorded by the 2020 ATCs by hour. At Site 1, the 7-day mean speeds were **consistently recorded at or under the 30mph PSL**, although **7-day 85%ile speeds were recorded as higher than 30mph between 17:00 and 07:00**.
- At Site 2, 7-day mean speeds recorded were typically at or below the 30mph PSL however the 7-day 85%ile speeds were recorded as 30mph or higher. Further analysis has therefore been undertaken to understand any underlying trends (see following page).




*Site 1 – 7-day Speed Summary recorded by 2020 ATC*

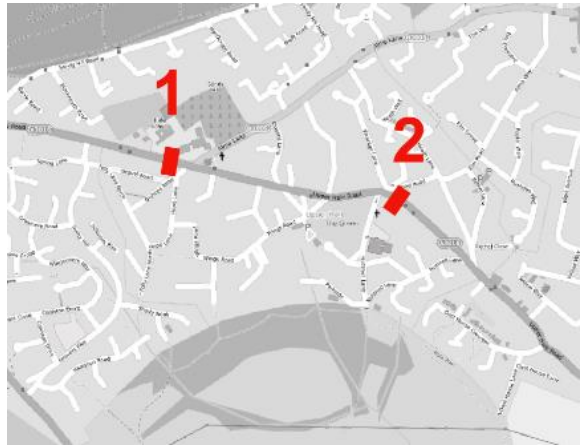



*Site 2 – 7-day Speed Summary recorded by 2020 ATC*

| Site | Mean (mph) | 85%ile (mph) |
|---|---|---|
| 1 | 23.22 | 28.66 |
| 2 | 27.27 | 30.80 |

*7-day Mean and 85%ile Speed Summary (2020 ATC)*

# Upper Hale Speeds (ATC Data)




**Speeds by direction**

- At Site 2, 7-day mean speeds were consistently recorded at or under the 30mph PSL, although 7-day 85%ile speeds were recorded as 30mph or higher. Further analysis has been undertaken to understand any underlying trends.
- 7-day mean and 85%ile speeds by direction (shown in the below table) indicate that 7-day mean and 85%ile speeds are generally below the 30mph PSL, with 85%ile speeds being within 1mph of the PSL in both directions.
- The graphs below summarise the 7-day mean and 85%ile speeds recorded by the 2020 ATCs by hour on Upper Hale Road (Site 2). In both directions, the mean speeds recorded are generally at or below the 30mph PSL. **The 7-day 85%ile speeds were consistently recorded as over the 30mph PSL, and up to 35mph between 17:00 and 07:00 in both directions**. This may be linked to the general character of the road in this location, which is straight with good visibility in both directions.


*Site 2 – 7-day Speed Summary recorded by 2020 ATC*

| Site | Mean (mph) | 85%ile (mph) |
|---|---|---|
| 2 EB | 27.46 | 31.01 |
| 2 WB | 27.08 | 30.60 |

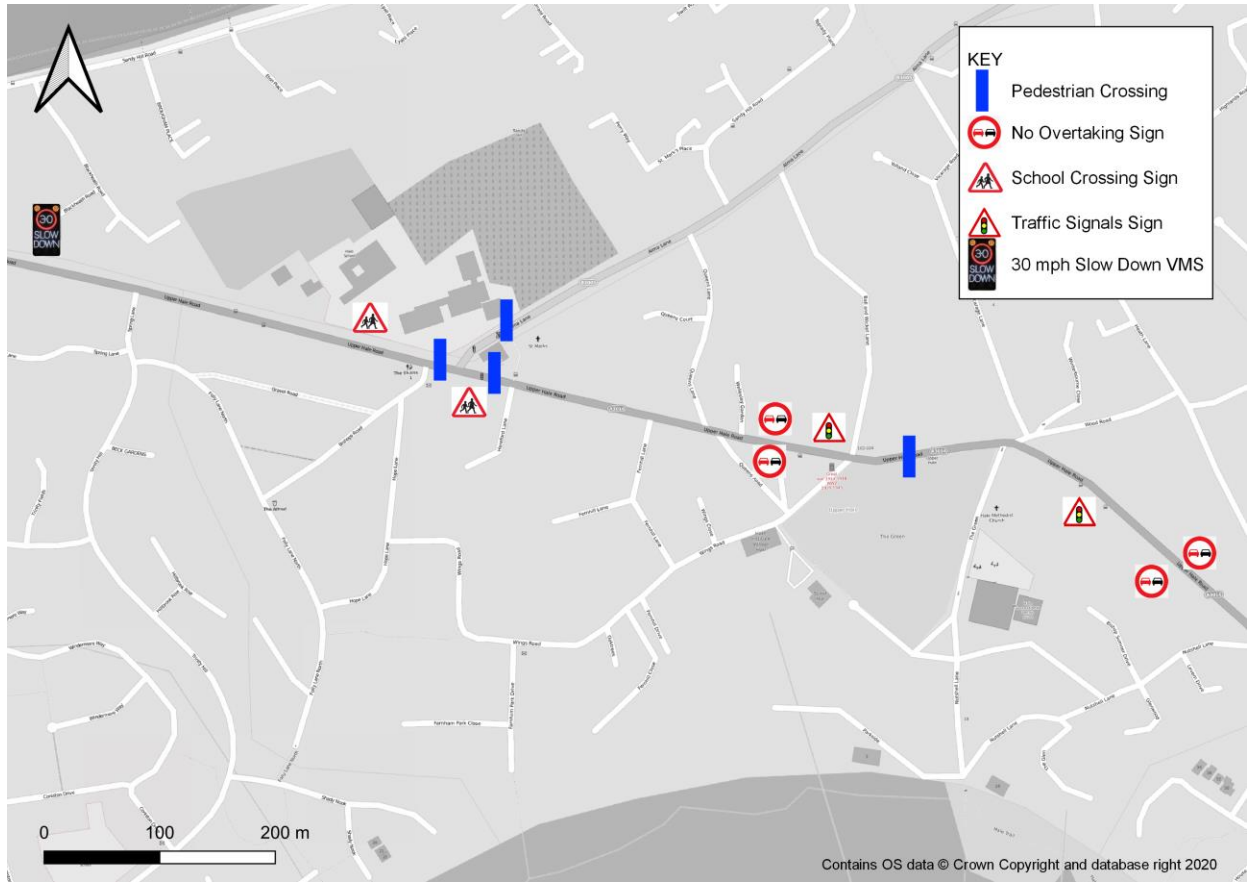
*7-day Mean and 85%ile Speed Summary by direction (2020 ATC)*

# Upper Hale – Existing Measures and Signage

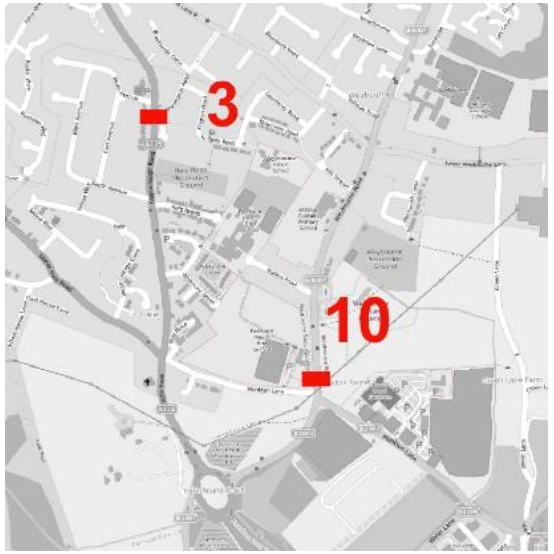
A number of traffic calming measures and crossings are in place on the A3016 through Upper Hale, as summarised in the plan:

- 30mph “Slow Down” VMS west of Spring Lane
- No overtaking signs in the vicinity of the junctions with Alma Lane, Queens Road and Nutshell Lane.
- School crossing signs in the vicinity of the junction with Alma Lane.
- Signalised pedestrian crossings at the junction with Alma Lane and adjacent to Hale Recreation Ground.

From on-site observations it was noted that there are significant stretches of the road without PSL repeater signs. Whilst the signage in place does comply with design standards, this may be a contributing reason for drivers travelling above the PSL.

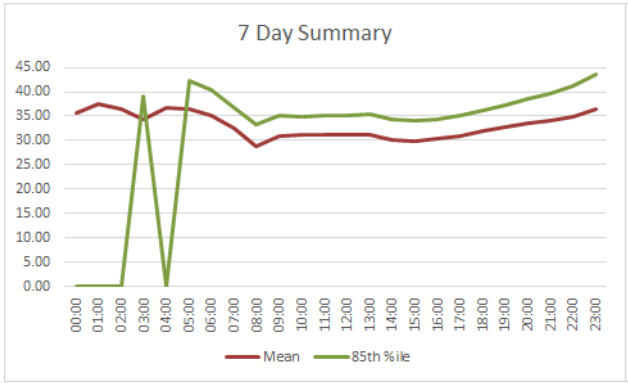


# Heath End and Weybourne Road Speeds (ATC Data)

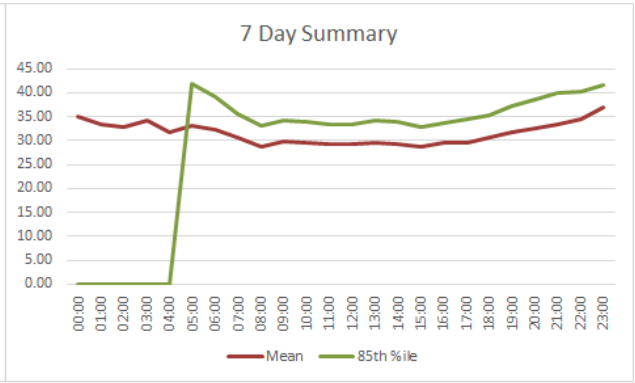



**Summary**

- ATC Sites 3 and 10 (2020) recorded speeds on Farnborough Road through Heath End (Site 3) and on Weybourne Road (Site 10). The map shows their locations.
- Overall, the maximum 7-day mean and 85%ile speeds were over the 30mph PSL on Farnborough Road (shown in the below table). On Weybourne Road the 7-day mean speed was 30mph, and 7-day 85%ile speed 34.5mph.
- The graphs below summarise the 7-day mean and 85%ile speeds recorded by the 2020 ATCs by hour. On Farnborough Road (Site 3), the 7-day mean and 85%ile speeds were consistently recorded as over the 30mph PSL. On Weybourne Road (Site 10), 7-day mean speeds were consistently recorded at or over the 30mph PSL, and 7-day 85%ile speeds at or over 35mph during most time periods.




*Site 3 – 7-day Speed Summary recorded by 2020 ATC*

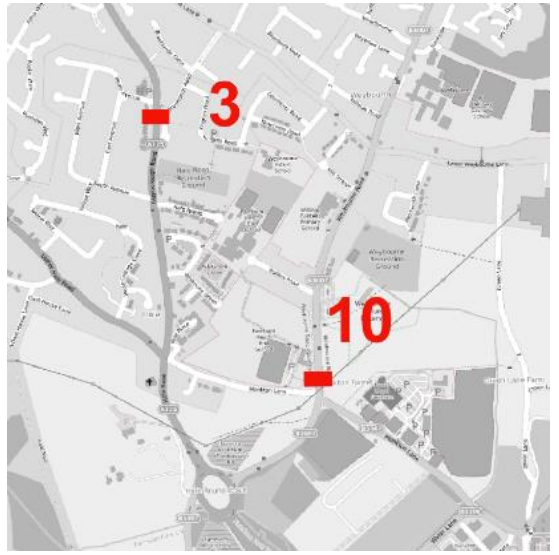



*Site 10 – 7-day Speed Summary recorded by 2020 ATC*

| Site | Mean (mph) | 85%ile (mph) |
|---|---|---|
| 3 | 31.05 | 35.56 |
| 10 | 29.79 | 34.55 |

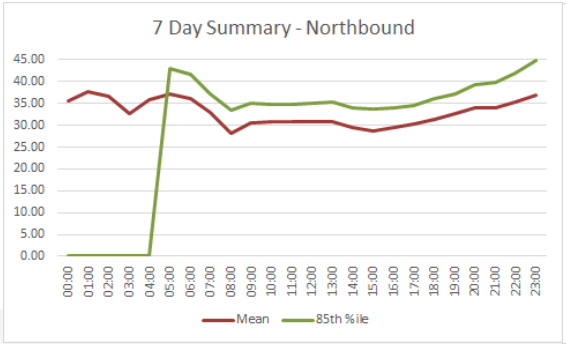
*7-day Mean and 85%ile Speed Summary (2020 ATC)*

# Heath End and Weybourne Road Speeds (ATC Data)

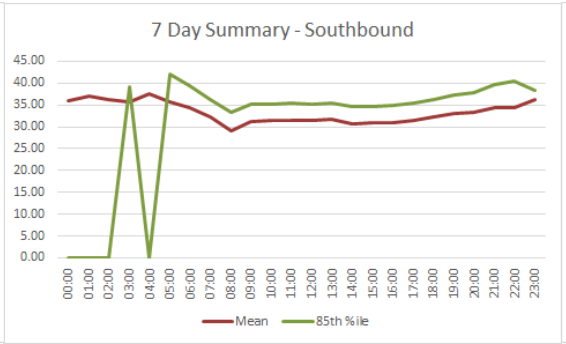


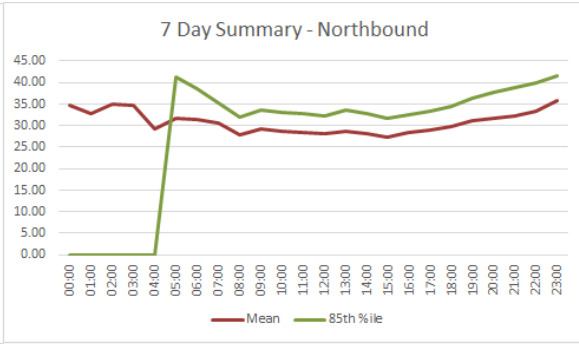

**Speeds by direction**

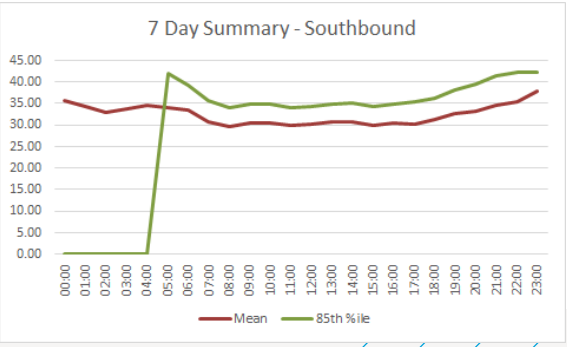
- The graphs below summarise the 7-day mean and 85%ile speeds recorded by the 2020 ATCs by hour on Farnborough Road (Site 3) and Weybourne Road (Site 10). At both locations, 7-day mean speeds were consistently recorded at or over the 30mph PSL, with 7-day 85%ile speeds at or over 35mph.
- On Farnborough Road (Site 3), 7-day mean speeds recorded were typically at or over the 30mph PSL for traffic travelling in both directions. The 7-day 85%ile speeds for traffic in both directions were also typically over 35mph, with 85%ile speeds reaching 45mph in the northbound direction during the over-night period. **This indicates persistent speeds above the 30mph PSL in both directions, particularly during the night.**
- On Weybourne Road (Site 10), 7-day mean and 85%ile speeds recorded were typically at or under the 30mph PSL in both directions between 07:00 and 17:00, but over outside of this period reaching over 35mph in both directions during the over-night period. The 7-day 85%ile speeds were consistently recorded as over the 30mph PSL in both directions in all time periods. Similar to Farnborough Road, **this indicates persistent speeds above the 30mph PSL in both directions, particularly during the night.**




*Site 3 – 7-day Speed Summary recorded by 2020 ATC*

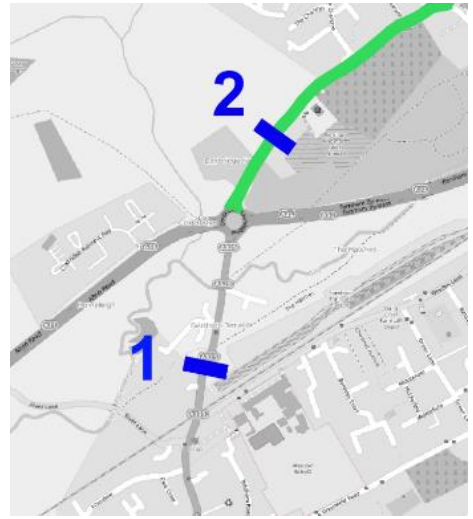


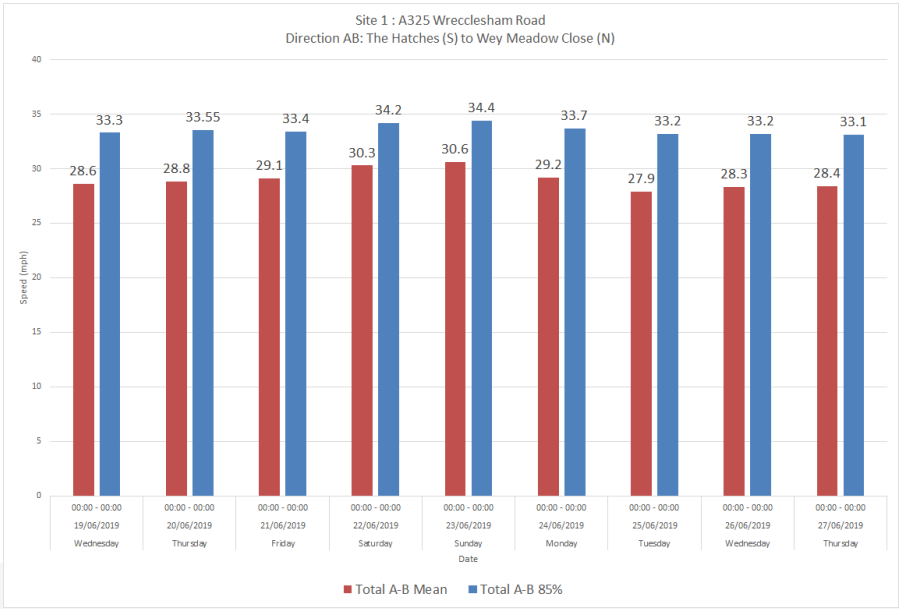




*Site 10 – 7-day Speed Summary recorded by 2020 ATC*

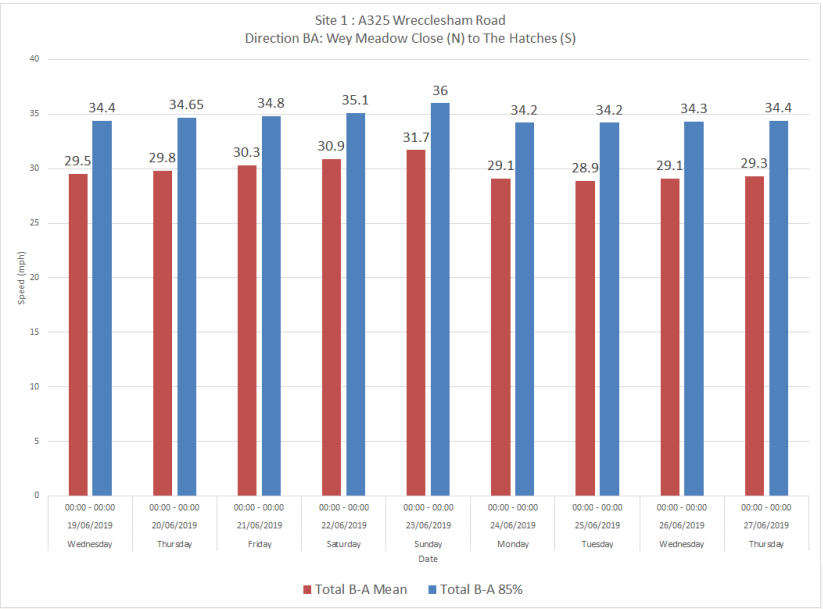
# Coxbridge Roundabout Approaches Speeds (ATC Data)




- ATC Sites 1 and 2 (2019) recorded speeds on Wrecclesham Road (Site 1) and on West Street (Site 2). The map shows their locations.
- Detailed speed data was not included in the 2019 counts and therefore mean and 85%ile speeds have been estimated at 29mph and 31mph respectively (see table below).
- The graphs below summarise the mean and 85%ile speeds by day in each direction for Wrecclesham Road (Site 1). **In both directions, the mean speeds were consistently recorded at or below the 30mph PSL on weekdays, and over the 30mph PSL on weekends. The 85%ile speeds were recorded at between 33 and 36mph in both directions**.




*Site 1 – Daily Speed Summary recorded by 2019 ATC (Northbound)*

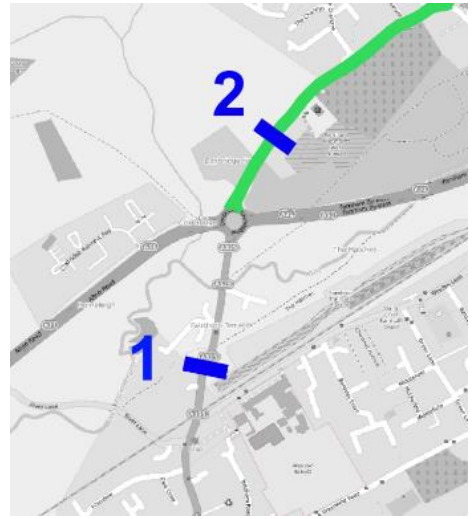



*Site 1 – Daily Speed Summary recorded by 2019 ATC (Southbound)*

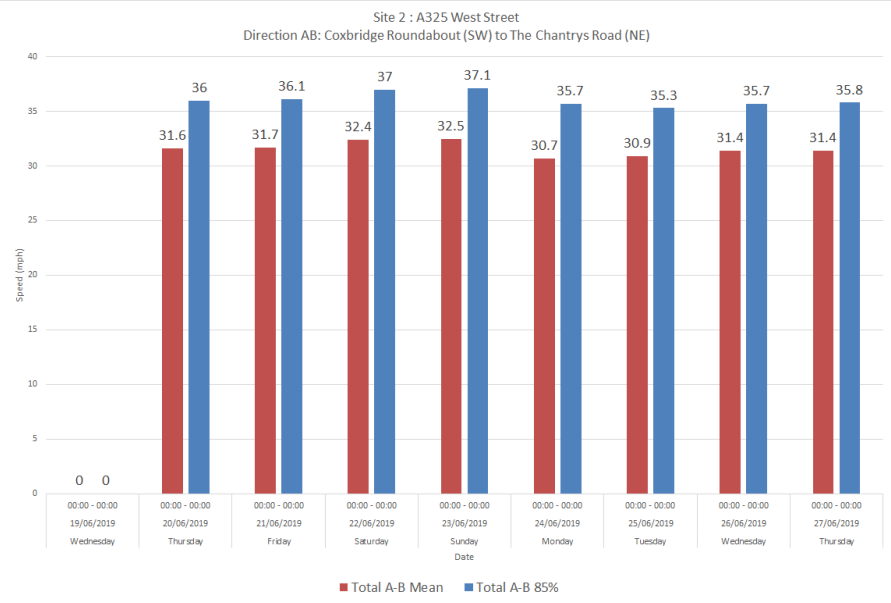
| Site | Mean (mph) | 85%ile (mph) |
|---|---|---|
| 1 2019 | C. 29 | C. 34 |
| 2 2019 | C. 31 | C. 36.5 |

*7-day Mean and 85%ile Speed Summary (2019 ATC)*

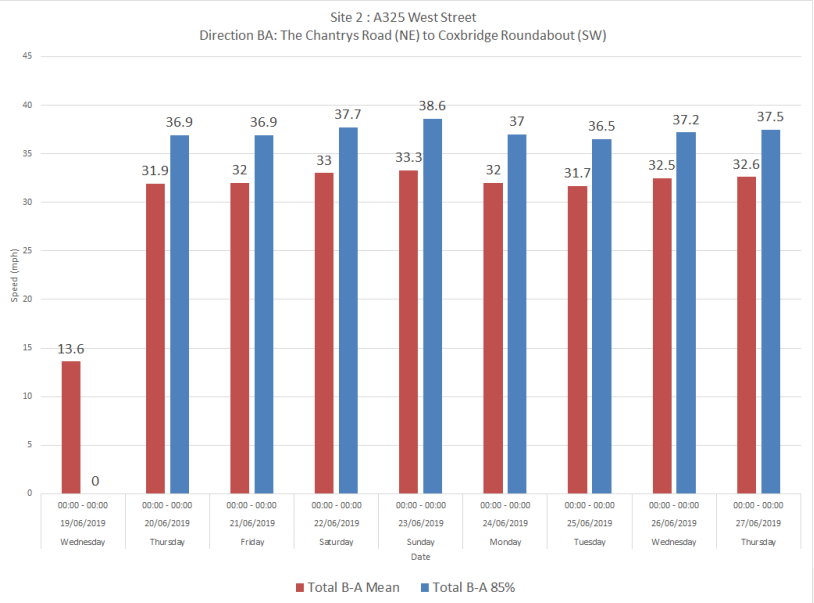
# Coxbridge Roundabout Approaches Speeds (ATC Data)




- The graphs below summarise the mean and 85%ile speeds by day in each direction for West Street (Site 2). **In both directions, the mean speeds were consistently recorded above the 30mph PSL. 85%ile speeds were recorded consistently over 35mph**.
- This may be indicative of the nature of the adjoining A31, which has a PSL of 70mph in this location.




*Site 2 – Daily Speed Summary recorded by 2019 ATC (Northbound)*




*Site 2 – Daily Speed Summary recorded by 2019 ATC (Southbound)*

# 1.3 Collisions and Air Quality

# Introduction

In addition to consideration of traffic volumes, analysis has been undertaken to understand the effects of speeds in the local area in terms of collisions, and air quality:

- STATS-19 and SCC collision data provide point-based locations of collisions and their associated characteristics (circumstances, vehicle types and casualties). This has been used to understand trends in collisions resulting in injuries which involved vulnerable users and those with speed listed as a causation factor within the last three years.
- Waverley Borough Council's 2020 Air Quality Annual Status Report (ASR) was published in July 2020. The report has been used to understand Air Quality conditions within the local area.

# Collision Statistics (2017-2020)

Data on collisions resulting in injuries recorded in Farnham and Upper Hale has been provided by the SCC Road Safety Team, for between 01/10/2017 and 30/09/2020.

The tables below summarise the number of collisions by type of user involved and severity of injury. The data indicates that a total of 104 total collisions were recorded over the three-year period. Few of the collisions resulted in fatal injuries, with the majority resulting in a slight or serious injury.

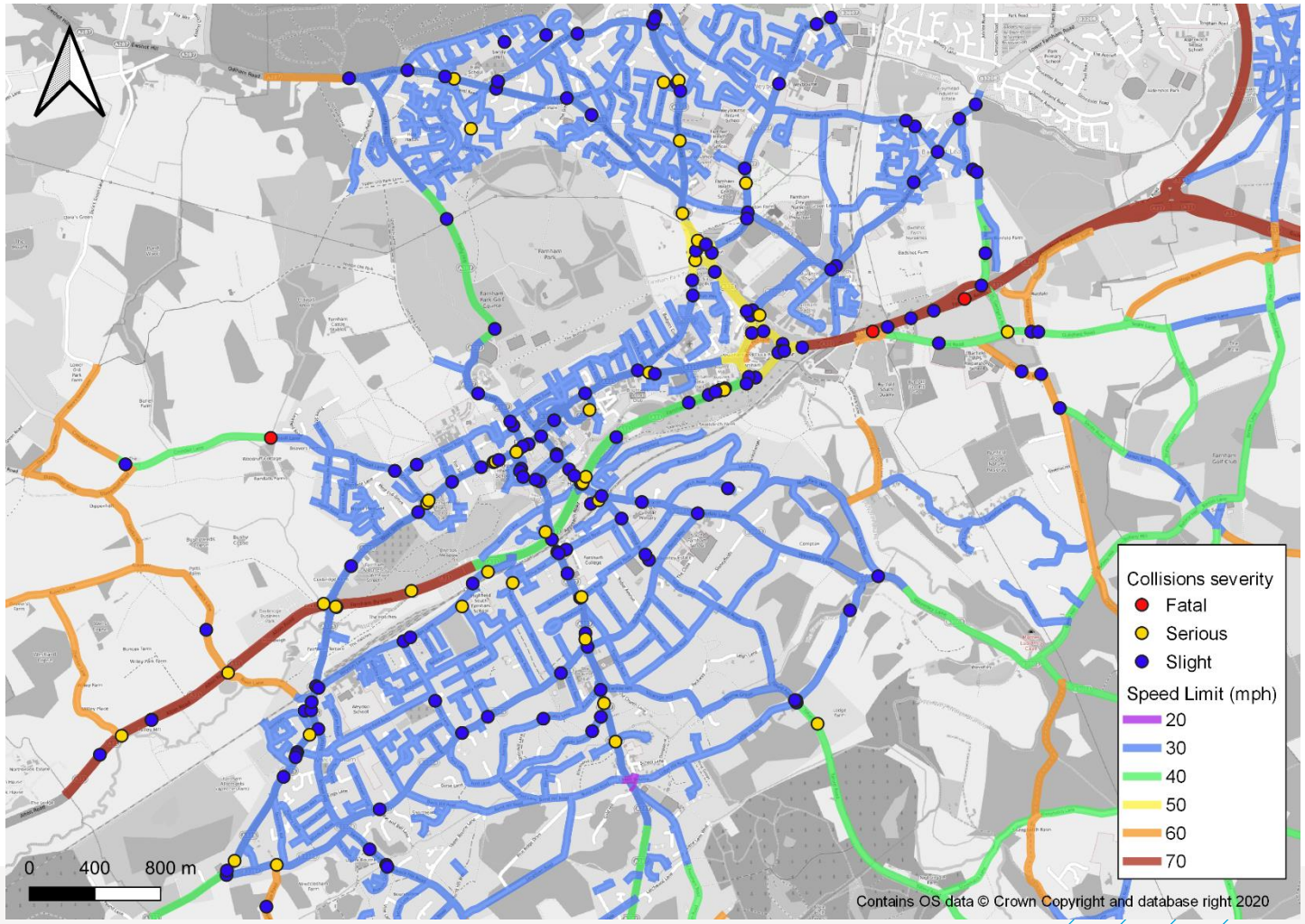
| Collisions involving: | Slight | Serious | Fatal |
|---|---|---|---|
| Motor vehicles only | 123 | 34 | 2 |
| 2 wheeled motor vehicles | 19 | 2 | 1 |
| Pedal cycles | 17 | 5 | 0 |
| Horses and other | 1 | 0 | 0 |
| **Total** | **160** | **41** | **3** |

| Casualties | Slight | Serious | Fatal |
|---|---|---|---|
| Vehicle driver | 111 | 18 | 1 |
| Passenger | 40 | 8 | 0 |
| Motorcycle rider | 19 | 2 | 1 |
| Cyclist | 17 | 5 | 0 |
| Pedestrian | 28 | 10 | 1 |
| **Total** | **261** | **43** | **3** |

# Collision Locations (2017-2020)

The map shows the locations of all collisions resulting in injuries in Farnham and the surrounds in the context of PSLs. The following conclusions can be drawn.

- A cluster of collisions causing injuries was identified (2017-2019) at the Shepherd and Flock Roundabout, A325 (Borough and West Street), Six Bells Roundabout and the A31 / South Street junction (Hickley's Corner).
- In the Upper Hale area there was less evidence of concentrations of collisions in comparison to central Farnham. A small number of collisions were identified on the A3016 and A325.
- Typically, the incidents involving more serious injuries are in the locations with higher PSLs.



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# Collisions With Speed Causation Factor

The data has been further analysed to identify collisions with speed listed as a causation factor. No prominent link between speed and collisions in any one area has been found.


| Description | Severity | PSL | NMUs | Weather |
|---|---|---|---|---|
| **A325 Farnborough Road (03/02/18)** For an unknown reason Car 2 has crossed the central grass reservation into the path of Car 1. Car 2 has struck Car 1 and rebounded onto the grass verge. | Slight | 30 | No | Dry |
| **A325 Farnborough Road At Junction With B3802 Water Lane B3802 (11/04/2018)** Car 1 was being pursued by police Car 2. Car 1 has braked heavily for roundabout but has failed to negotiate the roundabout and has struck the curb and mounted the roundabout. (Noting pursued by police is not considered typical speeding) | Slight | 50 | No | Dry |
| **Crooksbury Road Ouitside No.10 Farnham (22/06/2018)** Car 1 lost control on right hand bend and collided with trees in a garden. | Slight | 40 | No | Dry |
| **Upper Hale Road (A3016) At Junction With Spring Lane (28/02/20)** Car 1 was driving west along upper hale road approaching the junction of Upper Hale Road and Spring Lane. Car 2 was waiting to join the junction of Spring Lane and Upper Hale Road, to turn left onto Upper Hale Road. The collision occurred at this junction. | Slight | 30 | No | Wet/ Damp |

# Air Quality

Waverley Borough Council's 2020 Air Quality Annual Status Report (ASR), produced by Woods and published in July 2020, reports that:

- *"concentrations of carbon monoxide, benzene, 1-3 butadiene, lead, sulphur dioxide (SO2) and particulates (PM10) are compliant with UK Air Quality Objectives (AQOs). However, concentrations of nitrogen dioxide (NO2) have been found to exceed the annual mean AQO at various locations within the Borough."*
- Air Quality is monitored at a variety of locations, including: The Woolmead, Badshot Lea, Upper Hale Road, Guildford Road, Cherry Tree Close, South Street, The Borough, West Street, Downing Street, Union Road, Bridge Square, Station Hill, Waverley Road, Wrecclesham Road, Ridgeway Road and Wey Hill.
- Concentrations of PM10 monitored at the Farnham automatic analyser were below the annual mean AQO of 40µg/m3.
- Annual Mean NO2 concentrations in Farnham were below the annual mean AQO of 40µg/m3 at all bar one location (The Borough at 49.2µg/m3 – though the nearest receptor recorded 35.9µg/m3). It is noted that some locations, including Upper Hale Road, saw monthly recordings in excess of 40µg/m3.

The report concludes that "*Surrey has the highest car usage in the UK, and in some of the more rural areas within Waverley the infrastructure for public transport is limited, encouraging vehicular usage further. The air pollution in Waverley is mainly traffic-related and therefore every resident within the Borough has a role to play in reducing emissions."*

Whilst the report does not specifically refer to speeds being responsible for poor air quality, a new pedestrian crossing at the A87 Firgrove Hill is proposed as an intervention that will encourage an increase in walking and associated reduction in pollutant / emission.

# 2. Issues Identified

# Issues Identified

**Town Centre**

- There is local support for a 20mph speed limit within the Town Centre, including from pedestrians and cyclists. The speed survey data indicates that within the town centre itself speeds are generally low, with 7-day mean speeds of less than 24mph.
- On approach to the town centre, speeds are generally low to / from the south and west. Firgrove Hill, West Street and South Street all had recorded 7-day mean speeds of less than 24mph.
- Anecdotal evidence suggests there have been near misses with children crossing the road outside The Plough Pub and Mead Lane (West Street), and there is local desire for traffic calming measures outside the Plough Pub.
- Speeds were recorded to be typically low on approach to the town centre from the north (Castle Street) and east (East Street), with 7-day mean speeds at or less than 26mph. However, the data indicates that typically traffic speeds up as it leaves the town centre on these roads. On East Street it indicates that typically traffic speeds up as it leaves the town centre one-way-system. On Castle Street this may be linked to the general change in character of the road to the north and associated increase in PSL to 40mph (c. 500m north of the ATC location). With limited crossing facilities for pedestrians in this location, this could be a key safety concern.

# Issues Identified

**Upper Hale**

- Anecdotal evidence suggests speeding on Upper Hale Road, in particular East of Folly Hill and West of Farnborough Road.
- Pupils from four local schools must cross Upper Hale Road, and there is local desire for a 20mph school zone close for Hale Primary School / improved crossings and school signs.
- Narrow footways through Upper Hale cause safety concerns.
- The speed survey indicates that close to Hale School speeds are generally within the 30mph PSL during the day (with a 7-day mean of less than 24mph), however 85%ile speeds were recorded as higher between 17:00 and 07:00.
- South of Wood Road, 7-day mean speeds were slightly higher (but below the 30mph PSL) although the 7-day 85%ile speed was recorded as over the 30mph PSL and up to 35mph between 17:00 and 07:00. This may be linked to the general character of the road in this location, which is straight with good visibility in both directions.

# Issues Identified

**Heath End (A325 Farnborough Road)**

- Anecdotal evidence suggests speeding on Farnborough Road, in particular north of Upper Hale Road, and there has been local suggestion for traffic calming and increased signage (place signs and road painting).
- Pupils from four local schools must cross the A325, and there is local desire for a 20mph school zone for Heath End Secondary School and William Cobbett Primary / All Hallows pupils crossing).
- The speed survey data indicates persistent speeds above the 30mph PSL in both directions, particularly during the night.
- 7-day mean speeds recorded were typically at or over the 30mph PSL for traffic travelling in both directions. The 7-day 85%ile speeds for traffic in both directions were also typically over 35mph, with 85%ile speeds reaching 45mph in the northbound direction during the night.
- With the exception of a small road sign for “Heath End” (located to the north of Rowhills) there is limited signage to advise drivers they are entering a village / residential area.

**Weybourne Road**

- Anecdotal evidence suggests speeding on Weybourne Road, east of the Six Bells Roundabout.
- The speed survey data indicates persistent speeds above the 30mph PSL in both directions, particularly during the night.
- 7-day mean and 85%ile speeds recorded were typically at or under the 30mph PSL in both directions between 07:00 and 17:00, but over the 30mph PSL outside of this period reaching over 35mph in both directions during the over-night period. The 7-day 85%ile speeds were consistently recorded as over the 30mph PSL in both directions in all time periods.

# Issues Identified

**A325 Wrecclesham Road (south of Coxbridge Roundabout)**

- Anecdotal evidence suggests speeding on the A325 Wrecclesham Hill.
- The speed survey data indicates that traffic typically travels at the 30mph PSL on Wrecclesham Road in both directions, although speeds are slightly higher (c. 33mph mean) during weekends. The 85%ile speeds were recorded at between 33mph and 36mph in both directions.
- This may be indicative of the nature of the adjoining A31, which has a PSL of 70mph in this location.

**West Street (north of Coxbridge Roundabout)**

- The speed survey data indicates persistent speeds above the 30mph PSL in both directions (c. 33mph mean).
- 7-day 85%ile speeds for traffic in both directions were also typically over 35mph, with 85%ile speeds reaching 45mph in the northbound direction during the over-night period.
- This may be indicative of the nature of the adjoining A31, which has a PSL of 70mph in this location.

# 3. Policy and Guidance

# Introduction

Prior to identification of potential mitigation measures, National and Local policies and guidance have been reviewed to understand the requirements for implementation of speed-related measures and the process which must be followed.

The following pages summarise the policy and guidance requirements set out in:

- Setting Local Speed Limits - Surrey County Council's Policy (July 2014)
- Road Safety Outside Schools - Surrey County Council's Policy (July 2014).
- Department for Transport Circular 01/2013: Setting local speed limits.
- Traffic Signs Manual (2019): Traffic Control Chapter 6.
- Department for Transport Circular 01/2007: The use of speed and red light cameras for Traffic enforcement: guidance on deployment, visibility and signing.

# Speed limits and speed management

**Speed Limits**

Experience and research shows that changing to a lower speed limit on its own will not necessarily be successful in significantly reducing the speed of traffic if the prevailing mean speeds are much higher than the proposed lower speed limit.

If a speed limit is set too low and is ignored, then this could result in the majority of drivers incriminating themselves and could bring the system of speed limits into disrepute. There should be no expectation that the police would be able to provide regular enforcement if a speed limit is set too low.

**Speed Management**

Speed limits should be considered as part of a package of measures to manage vehicle speeds and improve road safety.

Changes to the highway (for example through narrowing, providing vertical traffic calming or re-aligning the road) may be required to encourage lower speeds in addition to any change in speed limit. Though these may be more expensive, they are more likely to be successful in the long term in achieving lower speeds without the need for increased police enforcement to penalise substantial numbers of motorists.

# Speed Limits

The minimum length of a speed limit should generally not be less than **600 metres** to avoid too many changes of speed limit along the route. In exceptional circumstances this can be reduced to 400 metres for lower speed limits, or even **300 metres on roads with a purely local access function, or where a variable 20 mph limit is introduced, for example outside a school**. Anything shorter is not recommended. The length adopted for a limit will depend on the limit applied and also on the conditions at or beyond the end points.

The terminal points of speed limits need to take account of the particular local circumstances, such as steep gradients, sharp bends, junctions, access roads, humpbacked bridges or other hazards, and also good visibility of the signs, and an extension of the speed limit may be needed to ensure this.

For consistency within routes, separate assessments should be made for each length of road of 600 metres or more for which a different speed limit might be considered appropriate. When this is completed, the final choice of appropriate speed limit for individual sections might need to be adjusted to provide reasonable consistency over the route as a whole.

Occasionally it may be appropriate to use a short length of **40 mph or 50 mph speed limit as a transition** between a length of road subject to a national limit and another length on which a lower limit is in force, for example on the outskirts of villages or urban areas with adjoining intermittent development. However, the use of such transitional limits should be restricted to sections of road where immediate speed reduction would cause risks or is likely to be less effective.

# 20mph speed limits and zones

### Signed only 20mph speed limits

The research shows that signed-only 20mph speed limits generally lead to only small reductions in traffic speeds. Therefore, these speed limits are most appropriate for areas where the mean speed is already **at or below 24mph** on a road, introducing a 20mph speed limit through signing alone is likely to lead to general compliance with the new speed limit.

### 20mph scheme with softer measures (i.e., traffic calming)

Where the existing mean speeds are **above 24mph** then a 20mph scheme with traffic calming measures (known as a 20mph zone) will be required. Research has shown that 20mph zones with traffic calming measures have been very effective in reducing speeds and casualties and may encourage modal shift and reductions in traffic flow on the road as vehicles choose alternative routes. However, traffic calming measures are more expensive and are not always universally popular.

### 20mph scheme with physical measures

It is possible to implement 20mph schemes that consist of a combination of physical features (where existing speeds are high), and signs alone (where speeds are already low) on different sections of the same road.

Research has shown that mandatory variable 20mph speed limits that apply only at certain times of day (using an electronic sign) are not very effective at managing vehicle speeds. **Surrey Police do not support 20mph speed limits that are not generally self-enforcing.** In addition, the electronic variable message signage that would be required for a **mandatory variable 20mph speed limit are not supported by SCC due to the extra maintenance burden.**

The DfT (Circular 01/13) encourages local authorities to introduce more 20mph schemes (limits and zones) in residential areas, to ensure greater safety for pedestrians and cyclists.

# Procedure to decide whether to change a speed limit

**Step 1: Request to change a speed limit is received**

Requests to change speed limits should be submitted to Surrey Highways. The Area Highways Team will then consider the request and if necessary, will consult with the local member and local committee to decide whether to proceed with a full speed limit assessment. The length of road over which a speed limit change is being considered should be at least 600m.

**Step 2: Measure existing speeds and analyse road casualty data**

The Area Highways Team will commission one-week automatic surveys of vehicle speeds (in both directions) in order to gather comprehensive data on existing mean vehicle speeds on the road. The Road Safety Team will assess the number and pattern of road casualties along any route where a new speed limit is proposed, with particular attention given to vulnerable road casualties such as pedestrians, cyclists, children and older people.

**Step 3: Compare the existing speeds with the suggested new speed limit**

DfT (Circular 01/2013) provides formulas derived from real examples of speed limit changes to predict the likely impact on traffic speeds of a change in speed limit.

**Step 4: Conduct feasibility of supporting engineering measures**

Where it is found that the existing measured mean vehicle speeds are too great for a signed-only change to a lower speed limit to be successful, then consideration of supporting engineering measures will be required.

# Procedure to decide whether to change a speed limit

**Step 5: Consult with Surrey Police Road Safety and Traffic Management Team**

As Surrey Police are responsible for the enforcement of speed limits it is essential that they are consulted on any proposals to change a speed limit and consideration of supporting engineering measures.

**Step 6: Local committee decision and allocation of funding**

A report describing the outcome of the speed limit assessment and recommendations will be submitted to the local committee for consideration and decision at one of their public meetings.

**Step 7: Advertisement of legal speed limit order and implementation**

If the local committee decide to proceed with a speed limit change then, in accordance with the Road Traffic Regulation Act 1984, a legal speed limit order will be advertised so that people have the opportunity to comment on the proposals.

# Road Safety Outside Schools

**Speed limits outside schools**

Requests are often made for lower speed limits outside schools as a result of concerns over the safety of children. It is the policy of SCC that there should always be an overall assessment of the safety issues outside a school to investigate and define the problem, rather than consideration of the speed limit in isolation.

School leadership and parents also have a vital role to play in ensuring the safety of children on the journey to school. Therefore, an assessment of the road safety education provided within the school and the school's travel plan will always be undertaken alongside an assessment of the road safety situation outside the school gate.

DfT regulations now allow the use of advisory "20 when lights show" with amber flashing lights on the approach to schools. However, the influence of these signs on vehicle speeds is likely to be minimal and is not enforceable as it is an advisory sign, not a compulsory change in the legal speed limit. Regulations do not permit amber flashing lights to be used on the approach to signal-controlled crossings or zebra crossings.

# Procedure to assess road safety outside schools

**Step 1: Request received.**

Any request for road safety improvements outside a school will be referred to the council's Sustainable Transport Team.

**Step 2: Consultation with local county councillor and highways colleagues**

Sustainable Transport Team, Local Highways Team, local member review of previous issues and planned activity.

**Step 3: School Travel Plan and road safety education assessment**

A meeting will be set up with the school to discuss the concerns and education provision. Sustainable Transport Team colleagues will advise the school if there are any gaps in provision and whether the school's travel plan needs to be updated.

**Step 4: Conduct site meeting and produce risk assessment**

On site assessment by Sustainable Transport Team, Local Highways, Road Safety and Surrey Police colleagues.

**Step 5: Assess and report upon options**

Options presented to school and local member. Local committee considers funding implications.

**Step 6: Scheme implementation (if the decision is taken to proceed)**

**Step 7: Evaluation and monitoring**

Follow up audit, site visit & consultation.

# Requirements for a Pedestrian Crossing

A site assessment may consist of: 1) a site survey, 2) a pedestrian survey, 3) a traffic survey, 4) crossing difficulty, 5) crossing times and speeds, and 6) road accident data.

**1) Site Survey**

A site survey should include the proposed site and a length of road **approximately 50m either side**. It may include the following:

a) A site plan to an appropriate scale showing the site layout and its major features. Photographs and online mapping tools may also provide useful information;

b) Carriageway width and number of lanes in each direction;

c) Effective footway width;

d) Features that could obscure visibility, or cause obstructions, particularly for mobility or visually impaired people. These may include trees, street furniture and lamp columns;

e) Existing traffic management measures such as waiting and loading restrictions and positions of bus stops;

f) Nearby facilities or buildings likely to generate significant pedestrian and vehicle movements for example schools, shops, bus stops, rail stations, hospitals, seaside facilities, day-care centres or sheltered housing;

g) Details of the driver's view at various points on the approach and of the pedestrian's view of approaching traffic at the crossing point; and

h) For Toucan and equestrian crossings, information about the relevant route (bridleway or cycle route) to establish if a crossing is required. Additionally, information about road layout to establish if the waiting area can be accommodated.

# Requirements for a Pedestrian Crossing

**2) Pedestrian survey**

A pedestrian survey should record both numbers and type. The numbers of people with characteristics that may make it more difficult for them to cross should be recorded, as these groups are particularly significant when assessing the difficulty of crossing at a site. These may include:

a) Visually impaired people;

b) Mobility impaired people;

c) Children;

d) Older people; and

e) People with pushchairs.

A low number of people crossing the road, particularly vulnerable road users, may not indicate low demand. The low numbers may be due to latent demand as people experience difficulty in crossing. Where a Parallel or Toucan crossing is being considered the number of cyclists should be recorded separately.

The type of surroundings will determine the profile of pedestrian movements and the most representative day of the week to carry out a count – for example, taking account of school start and finish times. The time of year may also have an impact. For example, coastal towns may experience large seasonal differences in pedestrian flows.

The length of a count will vary from site to site but should be chosen to be long enough to enable the peak periods to be identified.

# Requirements for a Pedestrian Crossing

**3) Traffic survey**

The numbers and type of vehicle flows should be surveyed, particularly during peak periods. A classified count may be useful to give an accurate breakdown of the proportion of particular classes of vehicles, such as cyclists, HGVs and passenger service vehicles.

Where proposals for crossings form part of a wider public realm scheme, some assumptions will need to be made and recorded about the impact of the scheme on traffic speeds and flows.

Vehicle speeds should be recorded at peak and off-peak periods. The measured speed of vehicles in each direction, taken roughly **50m before the crossing site**, should be recorded and the **highest 85th percentile speed** used in the assessment. The speed limit should also be noted.

**4) Crossing difficulty**

Crossing difficulty may be assessed by considering the number of gaps in the traffic flow which are acceptable to pedestrians, and the delay to pedestrians caused by having to wait for an acceptable gap.

An acceptable gap from kerb to kerb, or kerb to refuge, varies from person to person. A gap of 4 - 6 seconds (s) may be acceptable at normal urban traffic speeds, and shorter gaps where traffic is slower. Other groups may require larger gaps, of 10 - 12s or longer. The waiting times for various gap durations should be established for all types of users, particularly vulnerable groups.

# Requirements for a Pedestrian Crossing

**5) Average crossing time and speed**

Measuring the average crossing speed for pedestrians may reveal whether there is a large number of people who may be slower, and therefore need extra time to cross. Where a signal-controlled crossing is installed, the timings may need adjusting based on these crossing speeds.

**6) Road accidents**

Existing accident records for the proposed location, including a length of road either side, should be investigated to identify any patterns. If a crossing is being considered because of a high number of accidents a separate investigation may help to establish the cause and identify any other remedial measures that may be necessary. It may be that other measures are needed, such as traffic calming or improved visibility, either instead of or in conjunction with a formal crossing.

# Requirements for a Speed Camera

Safety cameras can be an effective measure at reducing vehicle speeds and causalities. In order to understand if cameras are the most suitable approach, the problem should be investigated first including the nature of the problem, current vehicle speeds, the proportion of vehicles exceeding the speed limit in free flowing conditions, the proportion of different collision types and the causes of those collisions. It is recommended that, before a decision is made to use camera enforcement, traffic authorities confirm that the speed limit at each proposed site is appropriate.

For selecting potential camera sites, it is recommended that **analysis of collision data** should be undertaken over a minimum period (e.g. most recent 3 years, or preferably 5 years) to determine whether a camera is an appropriate solution to reduce speeds and / or collisions at that site. **Average (mean) and 85$^{th}$ percentile speeds** should also be collected so that the data is not more than 12 months old. This will help to demonstrate the level of non-compliance with the speed limit, which itself should also have been constant over the same minimum period

DfT states that Vehicle Activated Signs (VAS) that are TSRGD compliant have been shown to be effective at reducing speeds and collisions when used instead of or in conjunction with safety cameras and may be considered as part of an overall casualty reduction strategy.

# Summary

- Changing to a lower speed limit on its own will not necessarily be successful in significantly reducing the speed of traffic if the prevailing mean speeds are much higher than the proposed lower speed limit. There should be no expectation that the police would be able to provide regular enforcement if a speed limit is set too low, and Surrey Police do not support 20mph speed limits that are not generally self-enforcing.
- Speed limits should be considered as part of a package of measures to manage vehicle speeds and improve road safety. Changes to the highway may be required to encourage lower speeds in addition to any change in speed limit.
- Where the mean speed is already **at or below 24mph** on a road, introducing a 20mph speed limit through signing alone is likely to lead to general compliance with the new speed limit.
- Where the existing mean speeds are **above 24mph** then a 20mph scheme with traffic calming measures (known as a 20mph zone) will be required.
- It is possible to implement 20mph schemes that consist of a combination of physical features (where existing speeds are high), and signs alone (where speeds are already low) on different sections of the same road.
- DfT regulations now allow the use of advisory “20 when lights show” with amber flashing lights on the approach to schools. However, the influence of these signs on vehicle speeds is likely to be minimal and is not enforceable as it is an advisory sign. Regulations do not permit amber flashing lights to be used on the approach to signal-controlled crossings or zebra crossings. SCC Highways will not support the use of mandatory variable 20mph speed limits, and it is their policy that there should always be an overall assessment of the safety issues outside a school to investigate and define the problem rather than consideration of the speed limit in isolation.

# 4. Proposed Intervention Measures

# Introduction

Potential interventions have been to respond to the key issues identified, with due consideration of where:

- Speed survey data indicates there are existing issues with speeding.
- There is local support for lowered speed limits.
- Safety issues have been raised or identified.
- National and SCC guidance would support additional measures.
- There is an opportunity to compliment interventions to encourage an increase in walking and / or cycling and associated reduction in pollutants / emissions.

Due to the nature of the study, potential interventions have been grouped by location and are summarised in the following pages. Commentary on alignment with policy / guidance and next steps has been provided; the priority of interventions and whether they are progressed will be dependent local member support (in line with policy and guidance outlined in Section 3).

# Town Centre

**Key Issues:**

There is local support for a 20mph speed limit within the Town Centre, including from pedestrians and cyclists.

Anecdotal evidence suggests there have been near misses with children crossing the road outside The Plough Pub and Mead Lane (West Street), and there is local desire for traffic calming measures outside the Plough Pub.

**Relevant Policy:**

- SCC guidance indicates that signed-only 20mph are most appropriate for areas where the mean speed is already at or below 24mph on a road, where introducing a 20mph speed limit through signing alone is likely to lead to general compliance with the new speed limit.
- Where the existing mean speeds are above 24mph then a 20mph scheme with traffic calming measures (known as a 20mph zone) will be required.
- It is possible to implement 20mph schemes that consist of a combination of physical features (where existing speeds are high), and signs alone (where speeds are already low) on different sections of the same road.
- The length of road over which a speed limit change is being considered should be at least 600m.

**Intervention: Town Centre 20mph Speed Limit**

The speed survey data indicates that within the town centre itself speeds are generally low with 7-day mean speeds of less than 24mph, which would support a signed-only 20mph speed limit as appropriate.

# Town Centre

The 7-day mean speeds of less than 24mph were recorded on Firgrove Hill, South Street and West Street (in the locality of the town centre), indicating that these locations would be ideal “gateways” for the Town Centre 20mph speed limit and would require signage only.

The 7-day mean speeds on East Street and Castle Street were 24.5mph and 26mph respectively, indicating that a signed-only 20mph limit along would not be appropriate. Further interventions in these locations are summarised below.

**Intervention: West Street Gateway**

On West Street in the vicinity of the town centre, 7-day mean speeds were recorded at less than 24mph. However, safety concerns have been raised around pupils crossing the road to attend Potters Gate Primary School and there is local desire for traffic calming measures outside the Plough Pub.

A “gateway” feature could be implemented drawing attention to the locality of the school. This could help to create a sense of place when drivers enter the area by creating a visual impact and introducing drivers to the town. Gateway Signs could be one part of traffic calming measures. Department for Transport recommends using vertical elements (Gateway Signs, speed limit signs, etc.) in conjunction with horizontal elements (build outs, pinch points, rumble devices, etc) to act as a speed reducing measure.

**Intervention: East Street Traffic Calming Measures**

On East Street the 7-day mean speed was recorded as 24.5mph, however it is noted that westbound the mean speed was 22.8mph. This indicates that a signed-only 20mph limit may be appropriate for traffic travelling towards the town centre, however traffic leaving the town centre would be likely to exceed a 20mph limit.

Surrey Police 20mph speed limits that are not generally self-enforcing, and therefore it is likely that a 20mph limit would need to be supported with traffic calming measures in this location.

# Town Centre

**Intervention: Castle Street Gateway**

On Castle Street the 7-Day mean speed was recorded at 26mph, however it is noted that southbound the mean speed was 24.5mph. Surrey Police do not support signed-only 20mph speed limits that are not generally self-enforcing, and therefore it is likely that a 20mph limit would need to be supported with traffic calming measures in this location.

A “gateway” feature could be implemented drawing attention entry to the town. This could help to create a sense of place when drivers enter the area by creating a visual impact and introducing drivers to the town. Gateway Signs could be implemented in conjunction with physical traffic calming measures and complimentary horizontal elements (build outs, pinch points, rumble devices, etc) to act as speed reducing measures.

**Intervention: Castle Street Crossing**

There are currently limited crossing facilities for pedestrians in this location, this could be a key safety concern particularly with the speed survey data indicating that drivers speed up when leaving the town.

The provision of a crossing in this broad location would provide a link between Farnham Castle and Farnham Park to the wider pedestrian and cycle network. The exact location of a crossing and suitability of the intervention would need to be considered as part of a “whole package” which takes into account other objectives identified in the OIP for travel around the town centre.

**Intervention: Folly Hill Speed Limit**

Northbound speeds may be linked to the general change in character of the road to the north and associated increase in PSL to 40mph (c. 500m north of the ATC location).

# Town Centre

Currently, Castle Street and the northern end of Folly Hill have a PSL of 30mph, and there is an approximate 1km stretch of 40mph limit between. There may be potential for a complimentary speed limit reduction to 30mph on this section of Folly Hill, however the character of the road in this location (which is more open countryside in nature) would not necessarily support this.

Speed surveys would need to be undertaken to understand current mean and 85%ile speeds on this stretch, to inform whether a signed speed limit reduction would be suitable or if significant engineering measures would be required.

**Next Steps:**

Liaise with Surrey Highways to discuss the principle of a reduction in PSL to 20mph in the Town Centre and supporting interventions. Progress measures where agreement in principle is forthcoming:

- 20mph Speed Limit: consult Surrey Police on change to the speed limit and supporting engineering measures.
- Physical speed reduction measures: design investigation to determine appropriate form of physical measures.
- Gateway Treatment: determine suitable treatment for the location e.g. Gateway Signs, speed limit signs, rumble devices.
- Crossings: investigate potential for implementation of a crossing on Castle Street as part of the OIP.
- Folly Hill Speed Limit Reduction: undertake speed surveys to understand current mean and 85%ile speeds on this stretch, to inform whether a speed limit reduction would be suitable or if significant engineering measures would be required.

# Upper Hale

**Key Issues:**

Anecdotal evidence suggests speeding on Upper Hale Road, in particular East of Folly Hill and West of Farnborough Road. The speed survey indicates that close to Hale School speeds are generally within the 30mph PSL during the day (with a 7-day mean of less than 24mph), however 85%ile speeds were recorded as higher between 17:00 and 07:00. South of Wood Road, 7-day mean speeds were slightly higher (but below the 30mph PSL) although the 7-day 85%ile speed was recorded as over the 30mph PSL and up to 35mph between 17:00 and 07:00. This may be linked to the general character of the road in this location, which is straight with good visibility in both directions.

Pupils from four local schools must cross Upper Hale Road, and there is local desire for a 20mph school zone close for Hale Primary School / improved crossings and school signs. Narrow footways through Upper Hale cause safety concerns.

There are a number of traffic calming measures and crossings in place on the A3016 through Upper Hale, including a 30mph “Slow Down” VMS west of Spring Lane, no overtaking signs, school crossing signs and signalised pedestrian crossings. From on-site observations it was noted that there are significant stretches of the road without PSL repeater signs. Whilst the signage in place does comply with design standards, this may be a contributing reason for drivers travelling above the PSL.

**Relevant Policy:**

- SCC guidance indicates that signed-only 20mph are most appropriate for areas where the mean speed is already at or below 24mph on a road, where introducing a 20mph speed limit through signing alone is likely to lead to general compliance with the new speed limit.
- Where the existing mean speeds are above 24mph then a 20mph scheme with traffic calming measures (known as a 20mph zone) will be required.

# Upper Hale

**Relevant Policy continued:**

- It is possible to implement 20mph schemes that consist of a combination of physical features (where existing speeds are high), and signs alone (where speeds are already low) on different sections of the same road.
- The length of road over which a speed limit change is being considered should be at least 600m.
- Research has shown that mandatory variable 20mph speed limits that apply only at certain times of day (using an electronic sign) are not very effective at managing vehicle speeds. In addition, the electronic variable message signage that would be required for a mandatory variable 20mph speed limit, are not supported by SCC due to the extra maintenance burden.
- It is the policy of SCC that there should always be an overall assessment of the safety issues outside a school to investigate and define the problem rather than consideration of the speed limit in isolation.

**Intervention: Upper Hale Signage Refresh**

The speed survey indicates that on Upper Hale Road speeds are generally within the 30mph PSL during the day, although the 85%ile speeds are higher overnight. There are a number of traffic calming measures and crossings in place on the A3016 through Upper Hale; however, it is noted that there are significant stretches of the road without PSL repeater signs.

A review and refresh of signage should be undertaken to ensure signage is located appropriately and visible. The speed limit message could be reinforced with addition repeater signs and on-road painted speed limits.

# Upper Hale

**Intervention: Village Treatment**

There is currently limited signage alerting drivers that they are entering a village / residential area. The provision of “village treatment” could help to create a sense of place when drivers enter Upper Hale by creating a visual impact and introducing drivers to the village.

Village Gateway Signs could be one part of traffic calming measures. Department for Transport recommends using vertical elements (Village Gateway signs, speed limit signs, etc.) in conjunction with horizontal elements (build outs, pinch points, rumble devices, etc) to act as a speed reducing measure.

**Intervention: Hale School Review**

Requests are often made for lower speed limits outside schools as a result of concerns over the safety of children. It is the policy of SCC that there should always be an overall assessment of the safety issues outside a school to investigate and define the problem rather than consideration of the speed limit in isolation. Therefore, an assessment of the road safety education provided within the school and the school’s travel plan should be undertaken.

Should the school have specific safety concerns, a meeting should be held to discuss the concerns and education provision. SCC Sustainable Transport Team colleagues can advise the school if there are any gaps in provision and whether the school’s travel plan needs to be updated. At this stage, the requirement for any physical interventions could also be raised.

**Intervention: 20mph Speed Limit**

There is local desire for a 20mph school zone close for Hale Primary School, as well as school signs and improved crossings for pupils from four local schools who must cross Upper Hale Road.

# Upper Hale

The length of road over which a speed limit change is being considered should be at least 600m. In exception circumstances this can be reduced where a variable 20mph speed limit is introduced (for example outside a school), however the electronic variable message signage that would be required for a mandatory variable 20mph speed limit are not supported by SCC due to the extra maintenance burden.

Approximately 800m to the west of the school the PSL increases to 60mph on Odiham Road. To provide a transition between this length of road and where a lower limit is in force, a section of 30mph or 40mph speed limit may be appropriate. DfT guidance indicates that the use of short transitional limits (e.g., less than 600m) should be restricted to sections of road where immediate speed reduction would cause risks or is likely to be less effective.

Whilst 7-day mean speeds of less than 24mph were recorded on Upper Hale Road in the vicinity of Hale School, which would support a signed-only 20mph speed limit, further to the east 7-day mean speeds of 27mph were recorded which would require supporting with traffic calming measures.

Taking into account the requirements for a transitional limit, it may be possible to achieve the minimum 600m distance to implement a 20mph PSL on Upper Hale Road between Spring Lane and Wings Road. A longer stretch may potentially be achieved with the implementation of physical interventions east of Wings Road to reduce speeds. However, given the nature of Upper Hale Road as part of a Strategic Route, if a restriction were put in place this may move traffic onto other roads that are less suitable, creating issues elsewhere. Any proposal for a 20mph limit would therefore need extensive liaison with SCC Highways and Surrey Police.

# Upper Hale

**Next Steps:**

- Signage Refresh: liaise with Surrey Highways to determine suitable signage refresh strategy.
- Village Treatment: liaise with Surrey Highways to discuss provision of village treatment in principle. If agreement in principle is forthcoming, determine suitable treatment for the location e.g. Village Gateway Signs, speed limit repeater signs, rumble devices.
- Hale School Review: undertake assessment of the road safety education provided within the school and the school's travel plan. Should the school have specific safety concerns, arrange a meeting with SCC Sustainable Travel Team to discuss the concerns and education provision.
- 20mph Speed Limit: Liaise with Surrey Highways and Surrey Police to discuss the principle of a reduction in PSL to 20mph on Upper Hale Road and supporting interventions.

# Heath End

**Key Issues:**

Anecdotal evidence suggests speeding on Farnborough Road, in particular north of Upper Hale Road, and the speed survey data indicates persistent speeds above the 30mph PSL in both directions, particularly during the night.

7-day mean speeds recorded were typically at or over the 30mph PSL for traffic travelling in both directions. 7-day 85%ile speeds for traffic in both directions were also typically over 35mph, with 85%ile speeds reaching 45mph in the northbound direction during the night.

With the exception of a small road sign for “Heath End” (located to the north of Rowhills) there is limited signage to advise drivers they are entering a village / residential area.

**Relevant Policy:**

SCC guidance indicates that signed-only 20mph are most appropriate for areas where the mean speed is already at or below 24mph on a road, where introducing a 20mph speed limit through signing alone is likely to lead to general compliance with the new speed limit.

- Where the existing mean speeds are above 24mph then a 20mph scheme with traffic calming measures (known as a 20mph zone) will be required.
- It is possible to implement 20mph schemes that consist of a combination of physical features (where existing speeds are high), and signs alone (where speeds are already low) on different sections of the same road.
- The length of road over which a speed limit change is being considered should be at least 600m.

# Heath End

**Intervention: Village Treatment**

It is not currently considered appropriate for a speed limit reduction to put in place at this location. Without a significant package of measures to manage vehicle speeds, for example re-aligning the road, it is unlikely that lower speeds would be encouraged. If a speed limit is set too low and is ignored, then this could result in the majority of drivers incriminating themselves and could bring the system of speed limits into disrepute.

There is currently limited signage alerting drivers that they are entering a village / residential area. This may be a contributory factor in the persistent speeding recorded by the speed surveys. The provision of “village treatment” could help to create a sense of place when drivers enter Heath End by creating a visual impact and introducing drivers to the village.

Village Gateway Signs could be one part of traffic calming measures. Department for Transport recommends using vertical elements (Village Gateway signs, speed limit signs, etc.) in conjunction with horizontal elements (build outs, pinch points, rumble devices, etc) to act as a speed reducing measure.

**Next Steps:**

- Liaise with Surrey Highways to discuss provision of village treatment in principle.
- If agreement in principle is forthcoming, determine suitable treatment for the location e.g. Village Gateway Signs, speed limit repeater signs, rumble devices.

# Weybourne Road

**Key Issues:**

Anecdotal evidence suggests speeding on Weybourne Road, east of the Six Bells Roundabout. The speed survey data indicates persistent speeds above the 30mph PSL in both directions, particularly during the night during freeflow conditions.

7-day mean and 85%ile speeds recorded were typically at or under the 30mph PSL in both directions between 07:00 and 17:00, but over outside of this period reaching over 35mph in both directions during the over-night period. The 7-day 85%ile speeds were consistently recorded as over the 30mph PSL in both directions in all time periods.

**Relevant Policy:**

- SCC guidance indicates that signed-only 20mph are most appropriate for areas where the mean speed is already at or below 24mph on a road, where introducing a 20mph speed limit through signing alone is likely to lead to general compliance with the new speed limit.
- It is possible to implement 20mph schemes that consist of a combination of physical features (where existing speeds are high), and signs alone (where speeds are already low) on different sections of the same road.
- The length of road over which a speed limit change is being considered should be at least 600m.
- Safety cameras are one of a wide range of measures that are effective at reducing vehicle speeds. Average (mean) and 85%ile speeds should be collected to demonstrate the level of non-compliance with the speed limit.

# Weybourne Road

**Intervention: Weybourne Road Safety Camera**

It is not currently considered appropriate for a speed limit reduction to be put in place at this location. Without a significant package of measures to manage vehicle speeds, for example re-aligning the road, it is unlikely that lower speeds would be encouraged. If a speed limit is set too low and is ignored, then this could result in the majority of drivers incriminating themselves and could bring the system of speed limits into disrepute.

The speed survey data does indicate persistent speeding above the 30mph PSL in both directions. This is particularly prevalent during the night, with 7-day mean speeds recorded over 35mph and 85%ile speeds over 40mph.

The implementation of a safety cameras could be effective at reducing vehicle speeds, particularly overnight.

**Next Steps:**

- Liaise with local partners to discuss the implementation of a safety camera on Weybourne Road, including providing collected speed data.

# Coxbridge Roundabout Approaches

**Key Issues:**

Anecdotal evidence suggests speeding on the A325 Wrecclesham Hill and on West Street north of Coxbridge Roundabout.

The speed survey data indicates that traffic typically travels at the 30mph PSL on Wrecclesham Road in both directions, although speeds are slightly higher (c. 33mph mean) during weekends. The 85%ile speeds were recorded at between 33mph and 36mph in both directions. On West Street, the speed survey data indicates persistent speeds above the 30mph PSL in both directions (circa. 33mph mean). The 7-day 85%ile speeds for traffic in both directions were also typically over 35mph, with 85%ile speeds reaching 45mph in the northbound direction during the over-night period.

This may be indicative of the nature of the adjoining A31, which has a PSL of 70mph in this location.

**Relevant Policy:**

- SCC guidance indicates that signed-only 20mph are most appropriate for areas where the mean speed is already at or below 24mph on a road, where introducing a 20mph speed limit through signing alone is likely to lead to general compliance with the new speed limit.
- Where the existing mean speeds are above 24mph then a 20mph scheme with traffic calming measures (known as a 20mph zone) will be required.
- It is possible to implement 20mph schemes that consist of a combination of physical features (where existing speeds are high), and signs alone (where speeds are already low) on different sections of the same road.
- The length of road over which a speed limit change is being considered should be at least 600m.

# Coxbridge Roundabout Approaches

**Intervention: Consider longer term measures as part of the OIP**

It is not considered appropriate for a speed limit reduction to be put in place in isolation at this location. Without a significant package of measures to manage vehicle speeds it is unlikely that lower speeds would be encouraged. If a speed limit is set too low and is ignored, then this could result in the majority of drivers incriminating themselves and could bring the system of speed limits into disrepute. In addition, given the nature of the roads as part of a Strategic Route, if a restriction were put in place this may move traffic onto other roads that are less suitable, creating issues elsewhere.

SCC carried out a review of the speed limits on Wrecclesham Road, The Street and Wrecclesham Hill in November 2018, at request of the County Councillor for the local area. The 'Wrecclesham 20mph Speed Limit Assessment Feasibility Report' recommended that *"30mph is the most appropriate speed limit and that no further measures are necessary at this time*".

Any interventions would need to be considered as part of a "whole package" which takes into account other objectives and priorities including (but not limited to) design improvements, corridor approach for A31, road safety, speeds on all approaches, public transport etc.

**Next Steps:**

Coxbridge Roundabout interventions are being investigated as part of the OIP. This will include consideration of interventions on all approaches.

# Potential Interventions

| Intervention | Description | Notes |
|---|---|---|
| **Town Centre** | 20mph limit | The speed survey data indicates that within the town centre itself speeds are generally low with 7-day mean speeds of less than 24mph, which would support a signed-only 20mph speed limit as appropriate. |
| **West Street Gateway** | 20mph limit with Gateway Feature | A “gateway” feature could be implemented drawing attention to the location of the school. This could help to create a sense of place when drivers enter the area by creating a visual impact and introducing drivers to the town. Gateway Signs could be one part of traffic calming measures. Department for Transport recommends using vertical elements (Gateway signs, speed limit signs, etc.) in conjunction with horizontal elements (build outs, pinch points, rumble devices, etc) to act as a speed reducing measure. |
| **East Street Traffic Calming** | 20mph limit with Traffic Calming | A signed-only 20mph limit may be appropriate for traffic travelling towards the town centre; however, traffic leaving the town centre would be likely to exceed a 20mph limit. Surrey Police does not support 20mph speed limits that are not generally self-enforcing, and therefore it is likely that a 20mph limit would need to be supported with traffic calming measures in this location. |
| **Castle Street** | 20mph with Gateway Feature | A “gateway” feature could be implemented drawing attention to the fact that drivers are entering the town. This could help to create a sense of place when drivers enter the area by creating a visual impact and introducing drivers to the town. Gateway Signs could be implemented in conjunction with physical traffic calming measures and complimentary horizontal elements (build outs, pinch points, rumble devices, etc) to act as speed reducing measures. |
| | Pedestrian Crossing | The provision of a crossing providing a link between Farnham Castle and Farnham Park to the wider pedestrian and cycle network. The location of a crossing and suitability of the intervention would need to be considered as part of a “whole package” which takes into account other objectives identified in the OIP for travel around the town centre. |
| **Folly Hill** | Speed Limit Reduction | In order to potentially reduce the speed limit, speed surveys will need to be undertaken to understand current mean and 85%ile speeds on this stretch, to inform whether a speed limit reduction would be suitable or if significant engineering measures would be required. |

# Potential Interventions

| Intervention | Description | Notes |
|---|---|---|
| **Upper Hale** | Signage Refresh in Upper Hale | A review and refresh of signage should be undertaken to ensure signage is located appropriately and is visible. The speed limit message could be reinforced with addition repeater signs and on-road painted speed limits. |
| | Gateway Treatment | Village Gateway Signs could be one part of traffic calming measures. DfT recommends using vertical elements (Village Gateway signs, speed limit signs, etc.) in conjunction with horizontal elements (build outs, pinch points, rumble devices, etc) to act as a speed reducing measure. |
| | Hale School Review | Should the school have specific safety concerns, a meeting should be held to discuss the concerns and education provision. SCC Sustainable Transport Team colleagues can advise the school if there are any gaps in provision and whether the school's travel plan needs to be updated. At this stage, the requirement for any physical interventions could also be raised. |
| | 20mph Speed Limit | There is local desire for a 20mph school zone close to Hale Primary School, as well as school signs and improved crossings for pupils from four local schools who must cross Upper Hale Road. Narrow footways through Upper Hale result in perceived safety concerns. |
| **Heath End (A325 Farnborough Road)** | Gateway Feature | Village Gateway Signs could be one part of traffic calming measures. Department for Transport recommends using vertical elements (Village Gateway signs, speed limit signs, etc.) in conjunction with horizontal elements (build outs, pinch points, rumble devices, etc) to act as a speed reducing measure. |
| **Weybourne Road** | Speed Cameras | The implementation of safety cameras could be effective at reducing vehicle speeds, particularly overnight. |
| **Coxbridge Roundabout Approaches** | Package of measures | Coxbridge Roundabout interventions are being investigated as part of the OIP. This will include consideration of interventions on all approaches. |

# Potential Interventions

| Intervention | Description | Short Term / Quick Wins | Longer Term |
|---|---|---|---|
| **Town Centre** | 20mph Zone | ✓ | |
| **West Street Gateway** | 20mph limit with Gateway Feature | ✓ | |
| **East Street Gateway** | 20mph limit with Traffic Calming | ✓ **(20mph speed reduction)** | Further assessment required for appropriate traffic calming measures |
| **Castle Street Gateway** | 20mph limit with Gateway Feature and Traffic Calming | ✓ **(20mph speed reduction)** | Further assessment required for appropriate traffic calming measures |
| | Pedestrian Crossing | | Further assessment required |
| **Folly Hill** | Speed Limit Reduction | | Further surveys required / to be considered as part of OIP |
| **Upper Hale** | Signage Refresh in Upper Hale | ✓ | |
| | Gateway Treatment | ✓ | |
| | Hale School Review | ✓ | Any potential interventions may require further surveys / assessment. |
| | 20mph Speed Limit | | Further assessment required. Extensive liaison with SCC Highways and Surrey Police required |
| **Heath End (A325 Farnborough Road)** | Gateway Feature | ✓ | |
| **Weybourne Road** | Speed Cameras | | Further assessment required |
| **Coxbridge Roundabout Approaches** | Package of measures | | To be considered as part of OIP |

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