



Wokingham
Active Travel Insight Study
May 2023

ANALYTICAL
SERVICES

agilysis



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INTRODUCTION

This report sets out the analysis undertaken using a variety of data sources to give insight into the degree to which identified parental barriers to active travel exist in Wokingham and specifically in the vicinity of six primary schools and four secondary schools.

Research has found that independent active travel by school age children, particularly those between 10 - 15 years, can be impacted by identified transport-related barriers including;

- Speeding traffic
- Busy roads
- Traffic collisions
- Absence of pedestrian crossings
- Conflict with parked vehicles obstructing visibility.

The report works through the analysis by first using the Open-Source Routing Machine (OSRM) engine to identify favoured walking, cycling or scooting routes between each school and its pupil's homes. The Annual Average Daily Traffic (AADT) volume and average all day speed on those routes most likely to be used by pupils will be examined from the Wokingham [Speed Compliance Tool](#) (SCT) to determine the level of traffic use and the extent of speeding on these routes. Data on collisions involving child pedestrians and pedal cyclists during the period 2017 – 2021 inclusive will also be captured from Wokingham's [CrashMap Pro](#) (Local) to understand when, where and how children using sustainable travel modes were involved in collisions.

In addition, data on Bike ownership, propensity to exercise and congestion, shown as indices will be captured from the [Active Streets Assessment Tool](#) (ASAT) to illustrate additional potential barriers to independent active travel.

Finally, the iRAP [Active Travel Tool](#) will be used to carry out an assessment of the road network in the vicinity of and in areas of relevance to each of the schools to provide an objective measure of the level of safety that is 'built-in' to the road (Star Rating). In addition, a measure of the level of traffic stress encountered by those walking and cycling is provided. Four categories of Active Travel; Pedestrian Footway; Pedestrian Crossing, Cycleway & Shared Footway & Cycleway may be assessed depending on the facilities available at each location. Whilst the Active Travel Tool is normally used to assess the impact of potential or planned improvements, in this report it is being used to give an indication of the level of safety of the existing infrastructure. This assessment will be carried out using the latest street level imagery available via Google Streetview, so may not account for changes made more recently on some routes.

To give context to the data relating to individual schools the following section gives an overview of child pedestrian and pedal cyclist safety in Wokingham.

SAFETY IN WOKINGHAM

The following resident data analysis has been captured from the MAST Headliner for Wokingham Child Casualties. It is based on the national STATS19 dataset provided to Road Safety Analysis by the Department for Transport for publication in MAST Online. In the five-year period 2017 – 2021 a total of 111 Wokingham resident child (U16) casualties were reported via STATS19 to have been injured as a result of a road traffic collision. This equates to 9% of all Wokingham's resident casualties during this period.

The following graph illustrates the age distribution of Wokingham’s resident child casualties which highlights a larger number of casualties are aged 11-13 years.

Figure 1 - Resident child casualties by age (2017 - 2021)

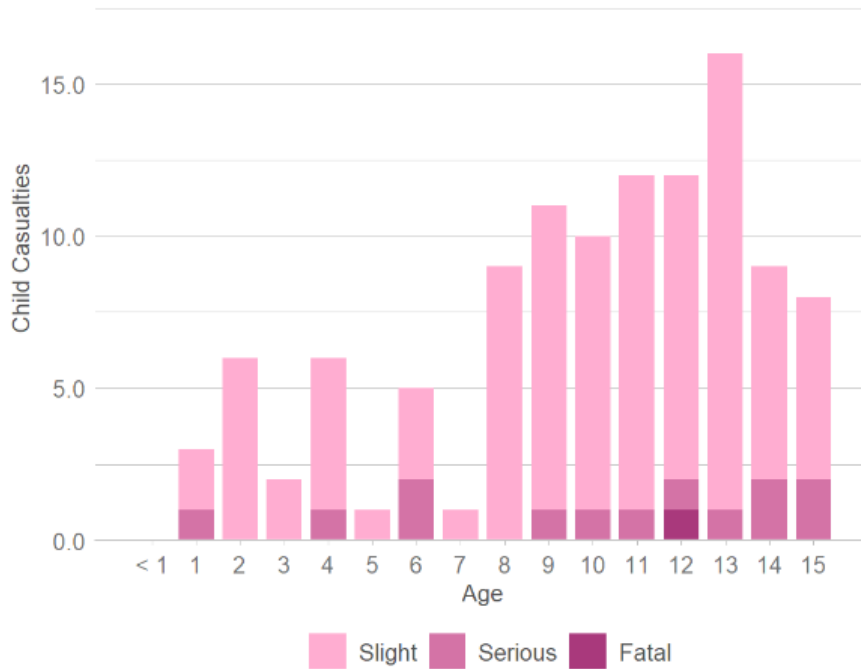
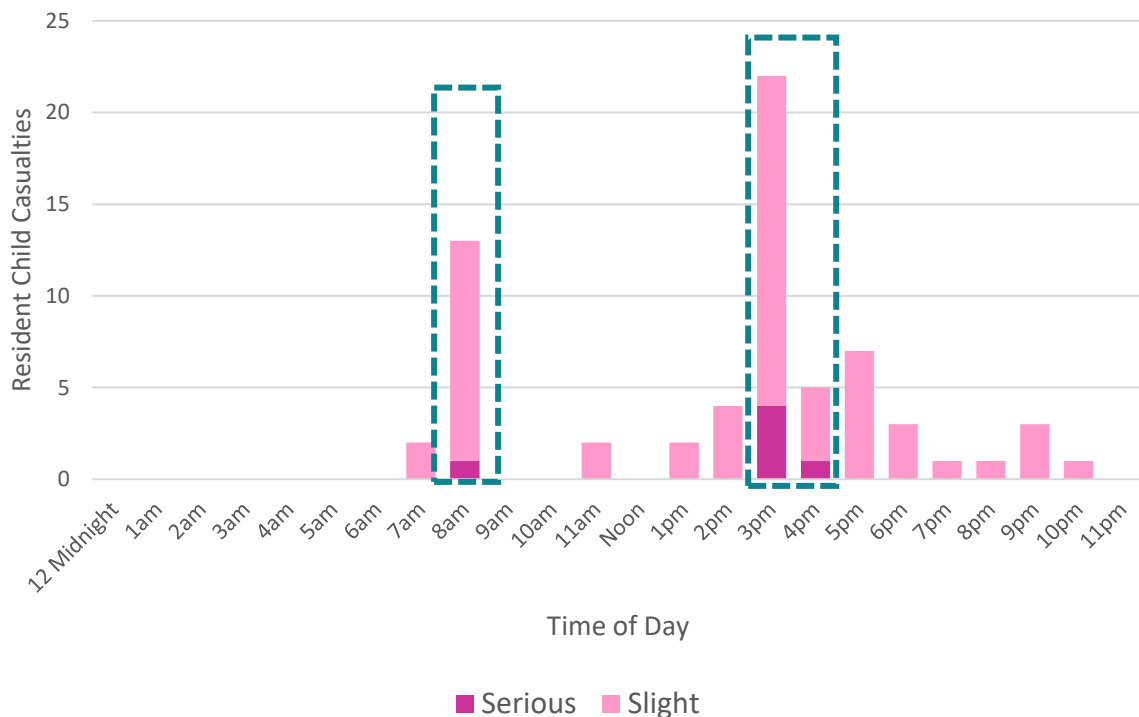


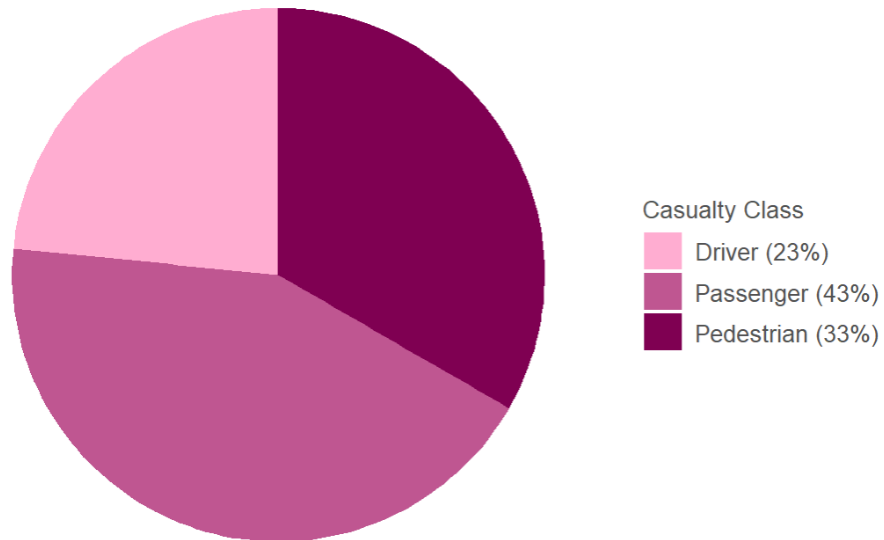
Figure 2 shows two distinct peaks in the time of day at which resident child casualties are injured on Wokingham’s roads, those being 8-9am and 3-4pm which is consistent with, but not exclusive to, the start and end of the school day.

Figure 2 - Resident Child casualties in Wokingham by time of day (2017 - 2021)



However, as Figure 3 shows the majority of children injured are not pedestrians or drivers (of pedal cycles) but injured as passengers of other vehicles, predominantly cars involved in collisions.

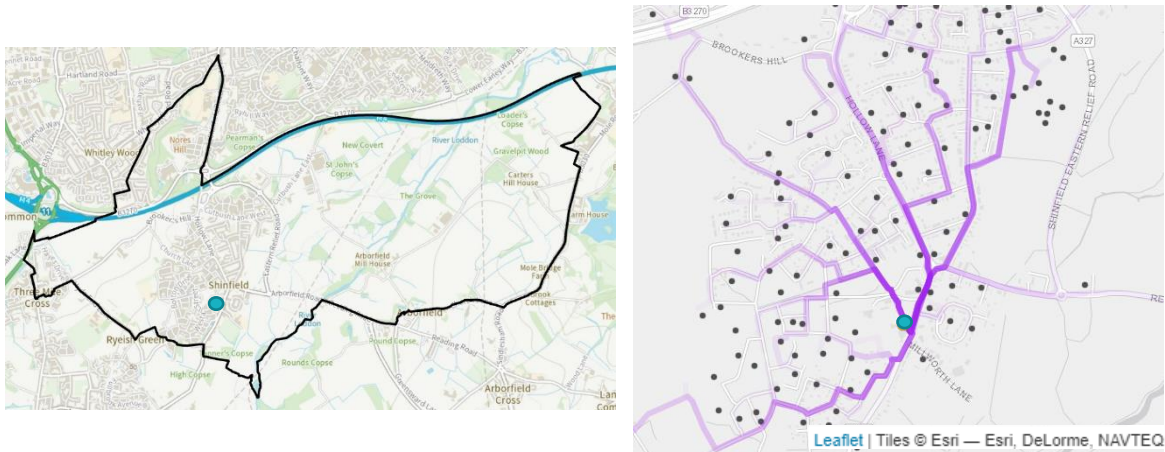
Figure 3 - Resident Child casualties by casualty class (2017 - 2021)



SHINFIELD INFANTS SCHOOL

Figure 4 illustrates the location and corresponding catchment for Shinfield Infants in addition to walking/cycling routes between pupil homes (black dots) and the school. The darker purple lines represent favoured active travel routes nearer the school. It should be acknowledged that the routing engine has identified a non-trafficked route to the school from the north-west for which, for obvious reasons, there will be no traffic data.

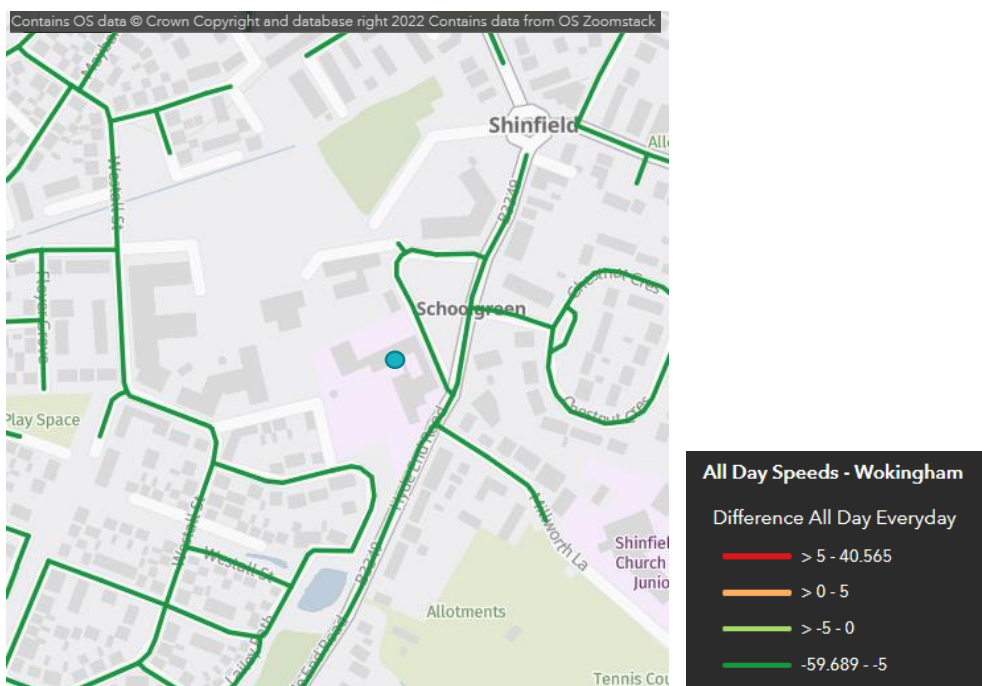
Figure 4 - Shinfield Infants School location and favoured active travel routes



TRAFFIC SPEED

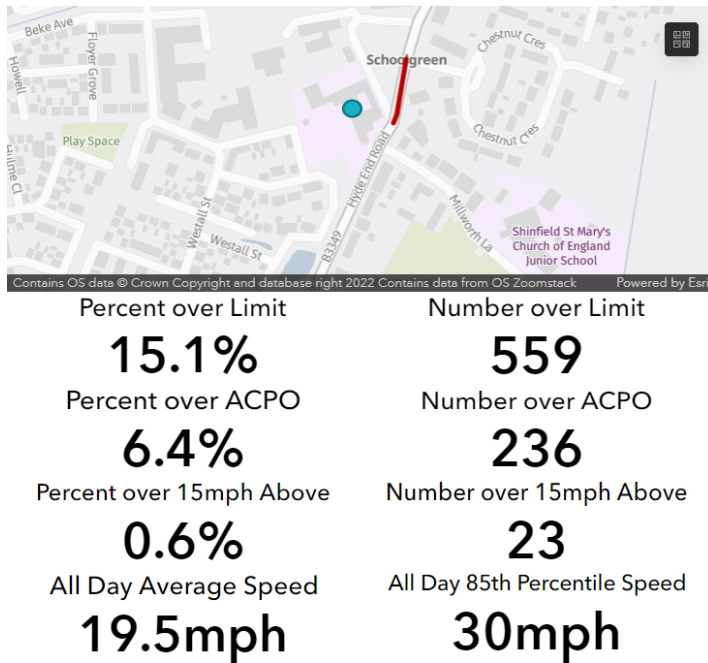
Using data in the Speed Compliance Tool (SCT), insight into all day average speeds on routes around the school can be collated. The following excerpt shows that all day average speeds are compliant with the posted speed limit of 30mph throughout the village.

Figure 5 - Shinfield All day average speed compliance



More specifically Figure 6 shows the level of compliance with the speed limit on Hyde End Road to the front of the school and indicates that 85% of vehicles are travelling at or below the speed limit. Just 15% of vehicles each day are estimated to be exceeding the speed limit, averaged over 12 months.

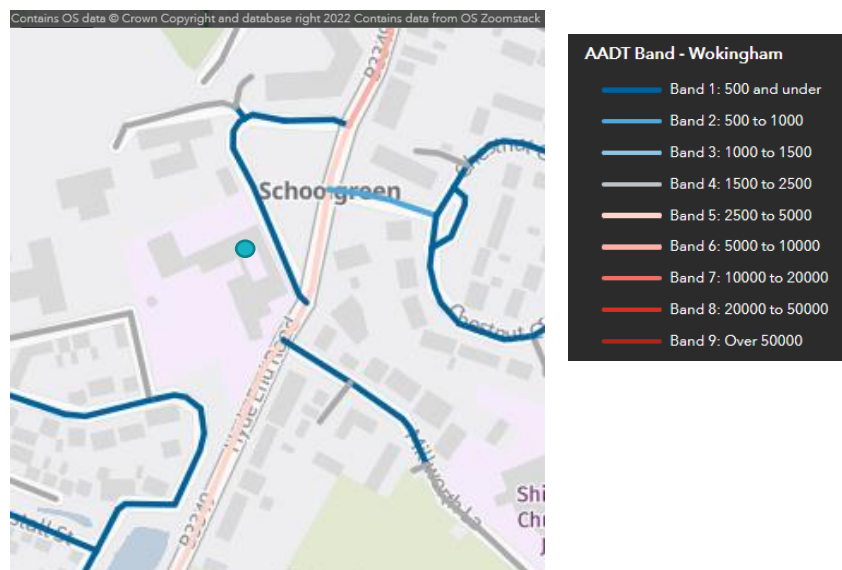
Figure 6 - Shinfield speed compliance by road section



TRAFFIC VOLUME

The second barrier to independent travel was concern with children navigating busy roads. The Annual Average Daily Traffic (AADT) indicates the volume of traffic using each road, captured from modelled data in SCT. Hyde End Road that passes Shinfield Infants is estimated to carry between 2,500 to 5,000 vehicles each day with School Green, from which the Infants is accessed, estimated to carry just 500 or less vehicles each day.

Figure 7 - Shinfield AADT levels



COLLISION HISTORY

As reported previously, 111 resident children (U16) were involved in a collision between 2017 and 2021 in Wokingham. Interrogation of CrashMap Local reveals that no child pedestrian or pedal cyclist injury collisions occurred in the vicinity of Shinfield Infants as illustrated by the excerpt in Figure 8.

Figure 8 - Shinfield CrashMap excerpt



ADDITIONAL ACTIVE TRAVEL BARRIERS

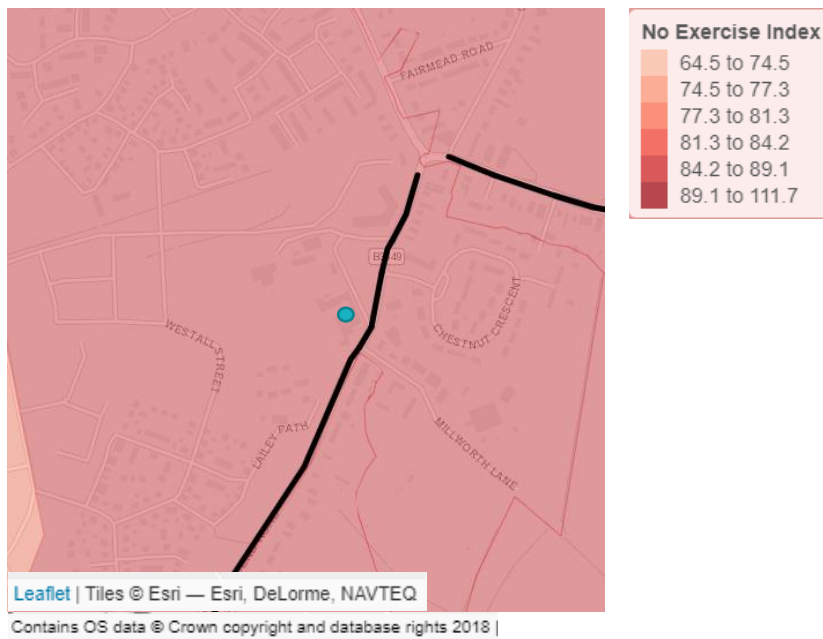
In addition to the barriers to independent active travel identified through research, data available through Experian's Mosaic segmentation of communities gives further insight into possible barriers to active travel.

Without access to a bicycle adopting this form of active travel is extremely challenging and hence reviewing Bike Ownership data can indicate likelihood of travelling by this means. Figure 9 shows Bike Ownership in the village of Shinfield, expressed as 100-based indices, across Lower Super Output Areas (LSOAs) and reveals that Bike Ownership across the village is slightly higher than the national average yet at the lower end of the scale compared to wider surroundings.

Figure 9 - Shinfield Bike Ownership Index



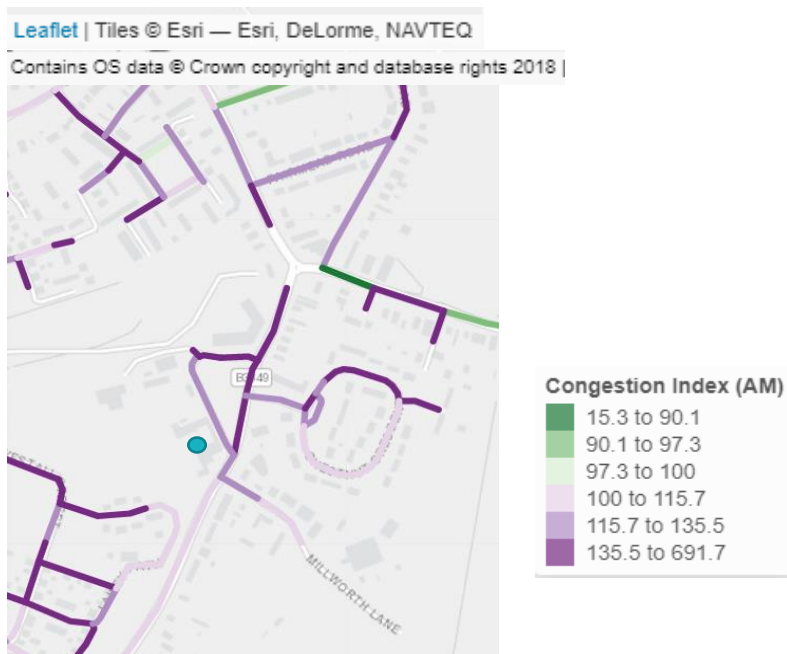
Figure 10 - Shinfield Level of Exercise Index



Conversely the No Exercise index, also expressed as 100-based indices shows that residents of Shinfield are below the national norm for no exercise and therefore more willing than some to be active.

Also relevant in understanding active travel potential is car travel conditions on the roads near a school. Congestion, the associated longer journey times and consequent air quality can be useful 'nudges' in favour of the use of more sustainable modes of travel. Figure 11 shows that the free-flowing speeds on Hyde End Road just north of the school are, on average, nearly twice as high as morning peak speeds and therefore there is heavy congestion on this route in the mornings. However this is also the site of a signal-controlled crossing so the congestion could be caused by a high frequency of crossing activations by pedestrians walking to and from school.

Figure 11 - Shinfield Congestion Index (AM)



INFRASTRUCTURE RATING

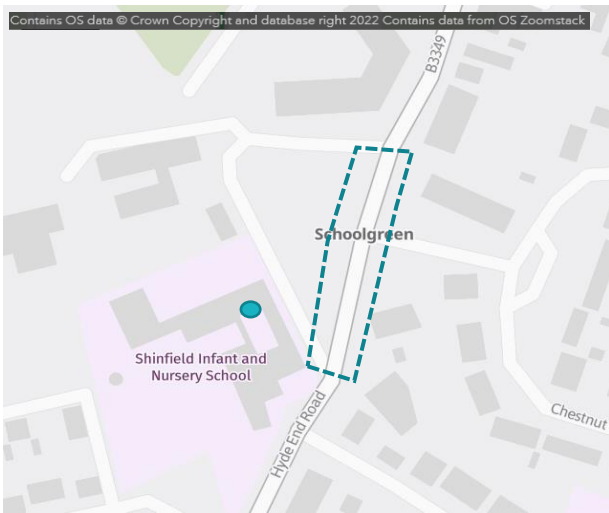
The Active Travel Tool has been created to allow road authorities to model the variables that make active travel safer, more pleasant and less stressful and to be able to assess how different facilities would perform both in terms of iRAP Star Ratings and the level of traffic stress on different roads.

Basic descriptors and a range of attributes relating to each assessment area have been adjusted to most closely reflect the assessed area’s characteristics.

Hyde End Road

Figure 12 details the results of the Active Travel Tool assessment of Hyde End Road. The level of built-in safety on Hyde End Road is determined to warrant a 4-star rating for the pedestrian footway immediately adjacent to the carriageway. There is an existing signal-controlled PUFFIN crossing and based on the attributes of the road it is attributed a 5-star rating offering pedestrians using it a moderate level of traffic stress.

Figure 12 - Shinfield Infrastructure Assessment



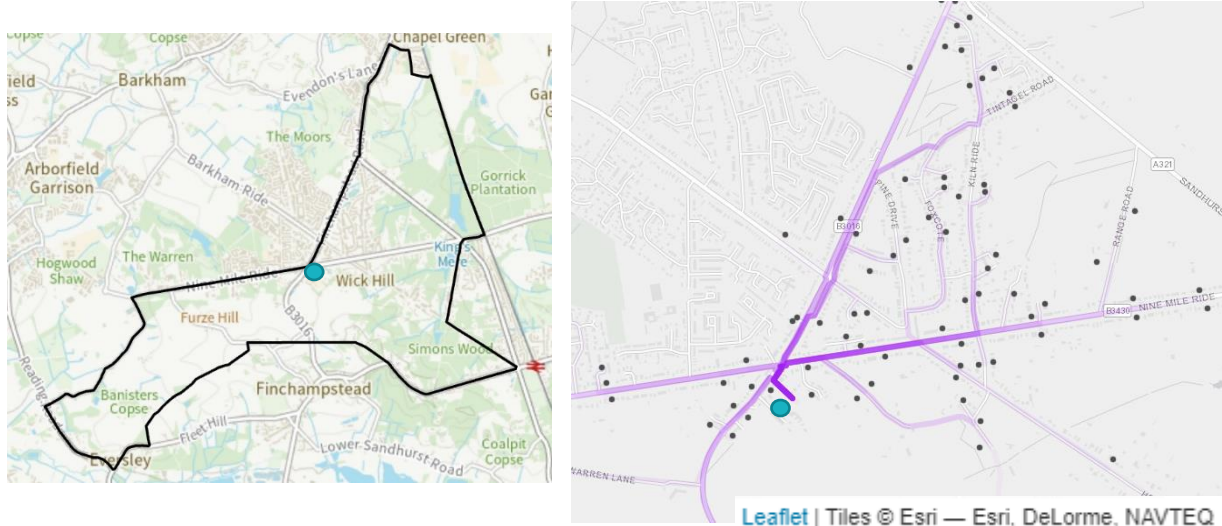
Pedestrian Crossing Type	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
Informal	★★★★☆	High stress
Traffic island	★★★★☆	High stress
Zebra (Unraised; no traffic island)	★★★★☆	Moderate stress
Raised informal crossing without traffic island	★★★★☆	High stress
Unraised zebra with traffic island	★★★★★	Moderate stress
Raised informal crossing with traffic island	★★★★★	High stress
Raised zebra without traffic island	★★★★★	Moderate stress
Raised zebra with traffic island	★★★★★	Low stress
Signal controlled (no traffic island)	★★★★★	Moderate stress
Signal controlled with traffic island	★★★★★	Low stress

Pedestrian Footway	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
No physical segregation (0-1m)	★★★★☆	Moderate stress

NINE MILE RIDE PRIMARY SCHOOL

The location and surrounding catchment of Nine Mile Ride Primary School to the south of Wokingham is shown in Figure 13 with the favoured active travel routes shown on the right.

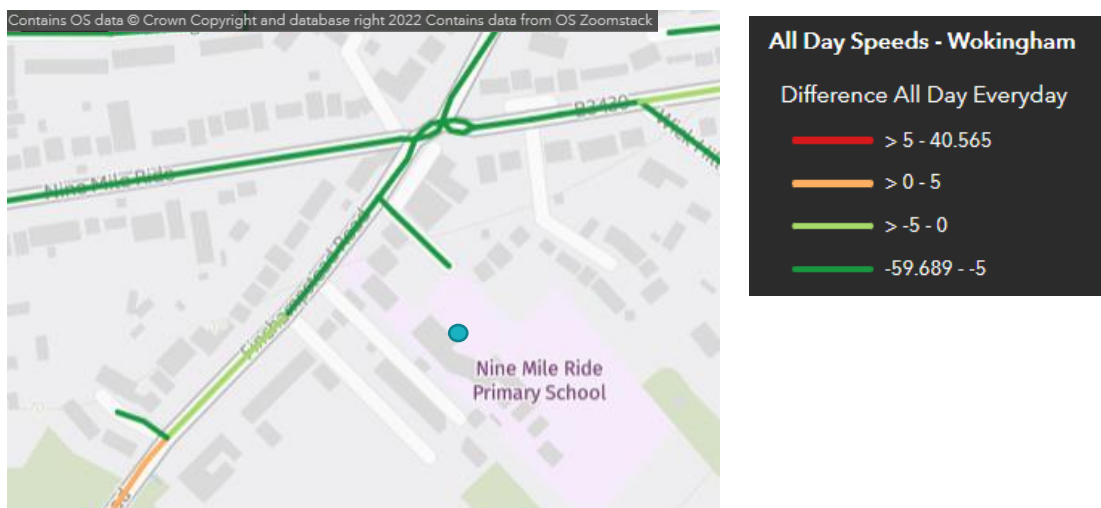
Figure 13 - Nine Mile Ride Primary location & favoured active travel routes



TRAFFIC SPEED

Figure 14 shows the excerpt from the Speed Compliance Tool and all-day average speeds on Finchampstead Road. Immediately outside the school compliance with the speed limit of 30mph is good although to the south-west speeds increase with compliance deteriorating as vehicles enter or leave the built-up area. Speed compliance to the north and north-east along Nine Mile Ride, identified as a favoured active travel route is good.

Figure 14 - Nine Mile All day average speed compliance



Focusing on Finchampstead Road, all day average speeds are estimated at 19.8mph with an operating (85th percentile) speed of 30.1mph.

Figure 15 - Nine Mile speed compliance by road section

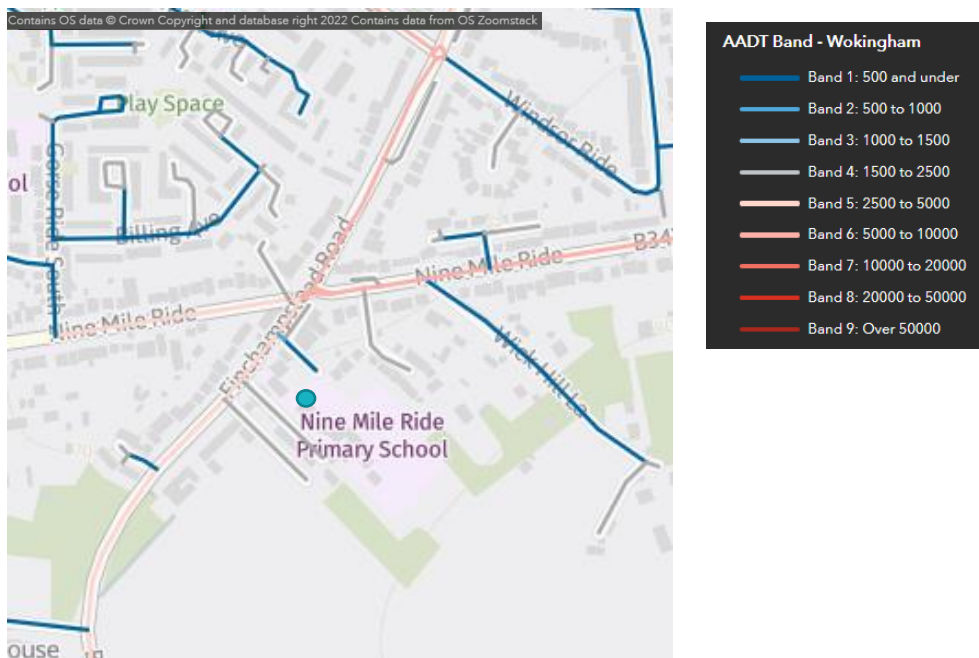


Percent over Limit	Number over Limit
15.2%	688
Percent over ACPO	Number over ACPO
6.3%	285
Percent over 15mph Above	Number over 15mph Above
0.6%	25
All Day Average Speed	All Day 85th Percentile Speed
19.8mph	30.1mph

TRAFFIC VOLUME

Figure 16 shows that Finchampstead Road is estimated to carry between 2,500 and 5,000 vehicles a day, whilst Nine Mile Ride to the north is estimated to carry slightly more at between 5,000 to 10,000 vehicles per day.

Figure 16 - Nine Mile AADT levels



COLLISION HISTORY

There have been 2 reported injury collisions involving U16s in the vicinity of the school. The collision, shown in Figure 17, on the west section of Nine Mile Drive involved a child pedal cyclist injured in

collision with a car turning into a driveway. The date and time of this collision do not suggest it occurred during a school related journey. The contributory factors (CFs) associated with this collision included CF403 'poor turn or manoeuvre', CF405 'failed to look properly', CF509 'distraction in vehicle' and CF602 'careless, reckless or in a hurry'. It is not possible to confirm which if these were attributed to which driver/rider involved in the collision.

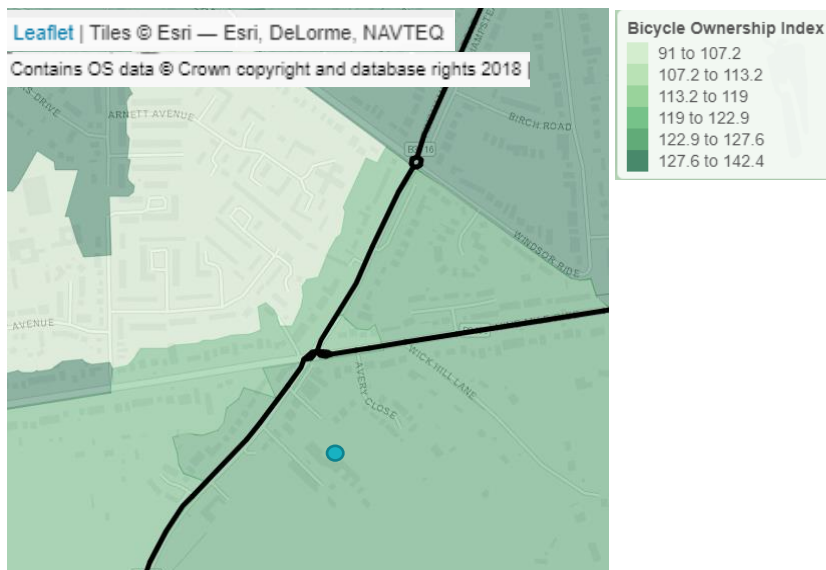
The second collision shown in Figure 17 involved two child pedestrians who were likely to be on a journey from school. The CF attributed to the pedestrians involved in this collision was CF808 '[pedestrian] careless, reckless or in a hurry'.

Figure 17 - Nine Mile Child Collisions



ADDITIONAL ACTIVE TRAVEL BARRIERS

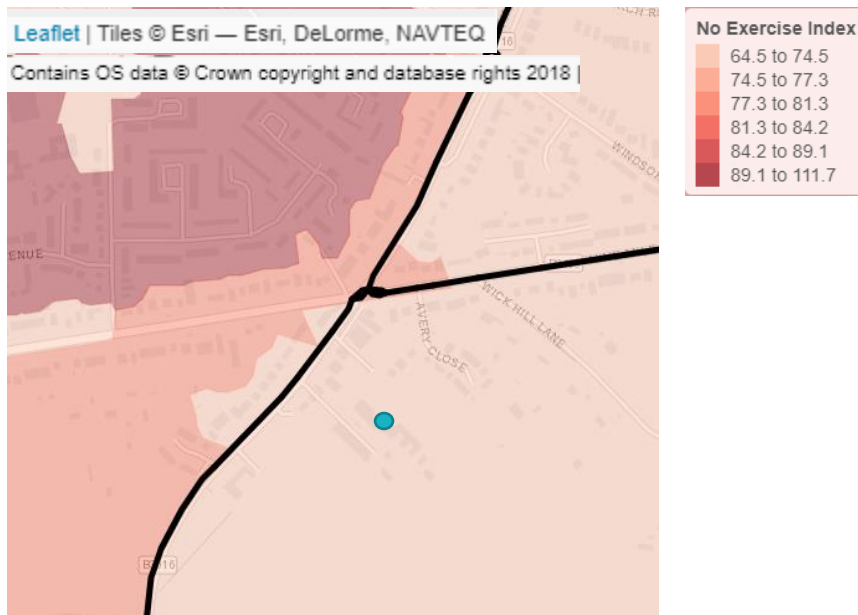
Figure 18 - Nine Mile Ride Bike Ownership Index



Again data on bike ownership, propensity to exercise and congestion can offer further insight into active travel patterns around Nine Mile Road School. Bike ownership is slightly higher than the national average in the immediate vicinity although there is variability in the Bike Ownership index to the north of the school, as shown in Figure 18.

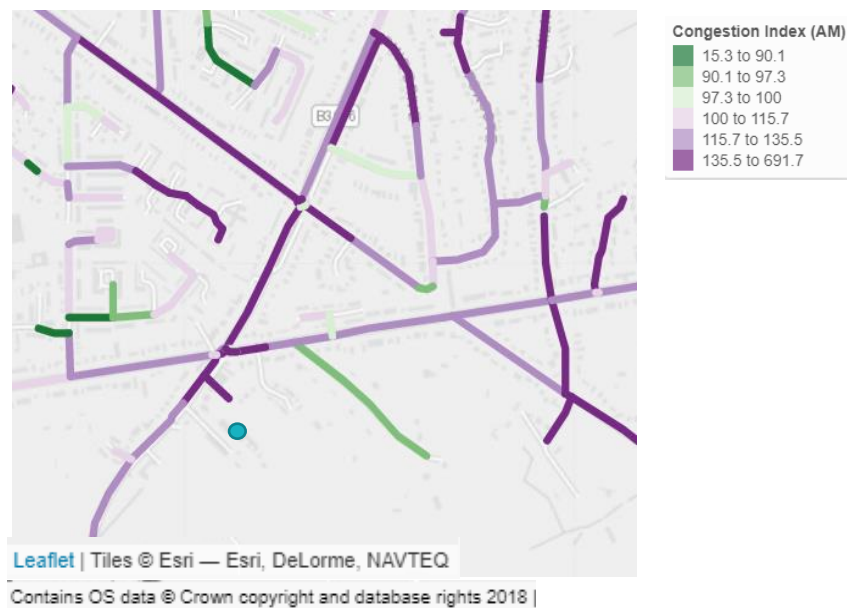
Inversely Figure 19 shows that there is high index level for exercise immediately surrounding the school with propensity to exercise falling closer to national average to the north.

Figure 19 - Nine Mile Ride Level of Exercise Index



The congestion index also indicates that there is lower average speeds during the morning peak hours of 7-9am to the north of the school although as a main junction this is unlikely to be as a result of school-related traffic alone.

Figure 20 - Nine Mile Ride Congestion Index



INFRASTRUCTURE RATING

The outputs of the Active Travel Tool assessment indicate there is a high level of traffic stress for pedestrians using the footway on Finchampstead Road, which is associated with a 3-star rating for the unsegregated footway. There are no designated crossing points along the road but the results of the assessment detailed in Figure 21 indicate that the introduction of most crossing types would offer a 4-star rating together with high or very high traffic stress. The introduction of a signal-controlled crossing would offer the highest star rating with a moderate level of traffic stress.

Finchampstead Rd

Figure 21 - Nine Mile Ride Infrastructure Assessment



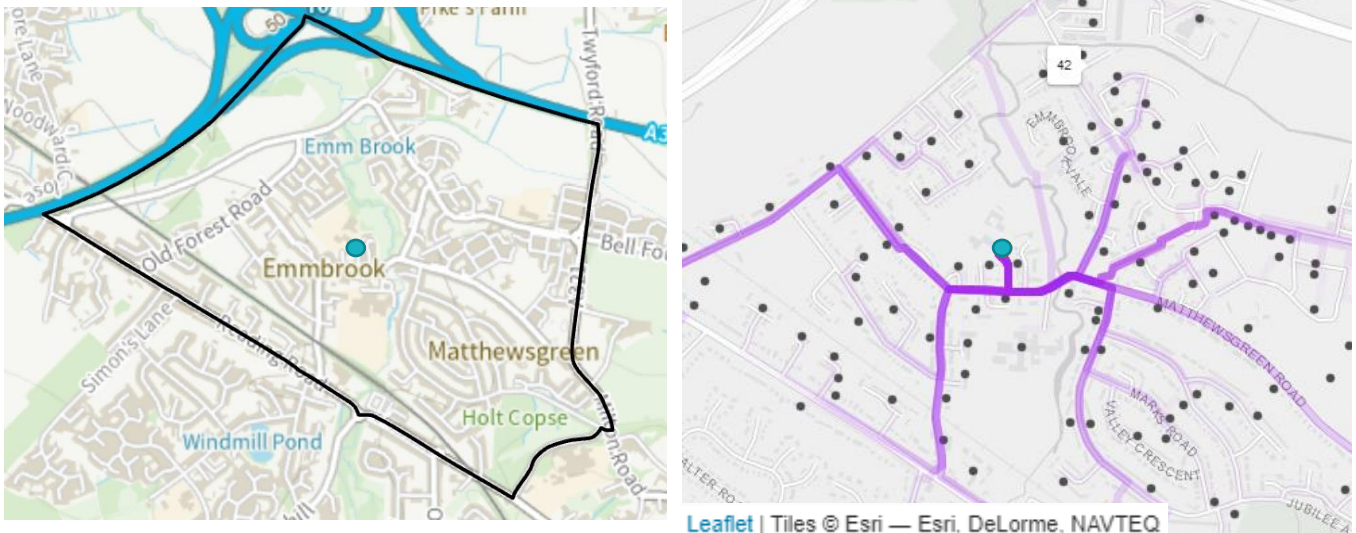
Pedestrian Footway	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
No physical segregation (0-1m)	★★★★☆	High stress

Pedestrian Crossing Type	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
Informal	★★★★☆	Very high stress
Traffic island	★★★★☆	Very high stress
Zebra (Unraised; no traffic island)	★★★★☆	High stress
Raised informal crossing without traffic island	★★★★☆	NA
Unraised zebra with traffic island	★★★★☆	High stress
Raised informal crossing with traffic island	★★★★☆	NA
Raised zebra without traffic island	★★★★☆	NA
Raised zebra with traffic island	★★★★☆	NA
Signal controlled (no traffic island)	★★★★★	Moderate stress
Signal controlled with traffic island	★★★★★	Moderate stress

EMMBROOK INFANT & JUNIOR SCHOOL

Emmbrook Infant and Junior School share a site in the residential area of Emmbrook, as shown in Figure 22. The favoured active travel routes to and from the school are shown by the darker purple lines and focus on Emmbrook Road to the immediate south of the school.

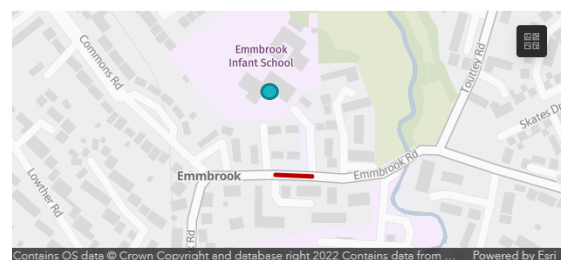
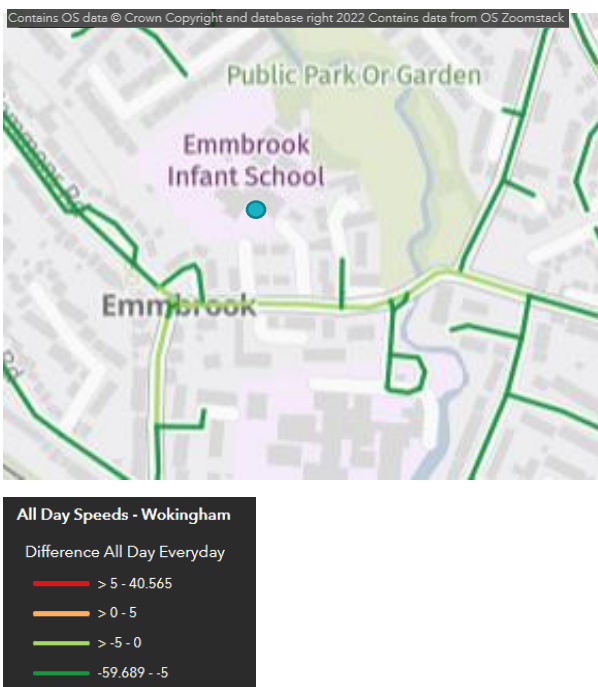
Figure 22 - Emmbrook Infants & Juniors location & favoured active travel routes



TRAFFIC SPEED

Emmbrook Infant and Junior School is situated within a 20mph zone in which all day average speeds are shown, in Figure 23, to be compliant. Focusing on Emmbrook Road immediately outside the school average speeds are shown to be c.15mph with operating (85th percentile) speeds at 20mph. Of those vehicles exceeding the speed limit, none were travelling at speeds higher than 24mph.

Figure 23 - Emmbrook Jnr All day average speed compliance Figure 24 - Emmbrook Jnr speed compliance by road section

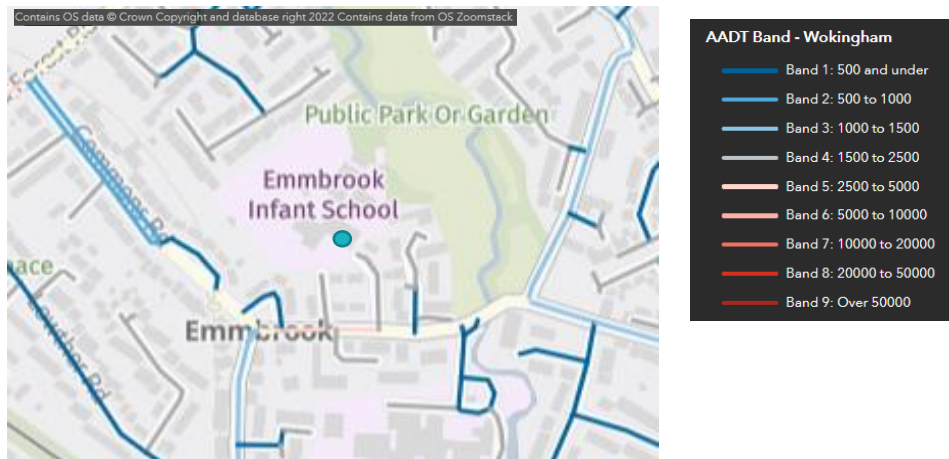


Percent over Limit	Number over Limit
18.9%	484
Percent over ACPO	Number over ACPO
4.2%	108
Percent over 15mph Above	Number over 15mph Above
0.0%	0
All Day Average Speed	All Day 85th Percentile Speed
15.8mph	20.7mph

TRAFFIC VOLUME

Although traffic volumes on Emmbrook Road are shown to range between 1,500 and 5,000 vehicles per day the variability in modelled AADT along Emmbrook Road suggests these estimates could have been influenced by school related traffic to both the Junior and Senior school to the south. Across the wider area annual average traffic volumes are estimated at up to 1,500 vehicles per day.

Figure 25 - Emmbrook Jnr AADT levels



COLLISION HISTORY

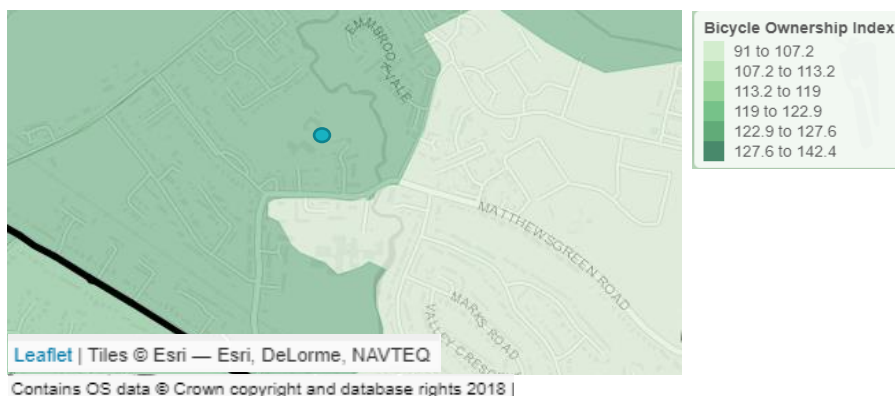
Figure 26 - Emmbrook Jnr CrashMap excerpt



As shown by the CrashMap excerpt in Figure 26, there have been no reported injury collisions involving child pedestrians or pedal cyclists in the area around Emmbrook Junior School.

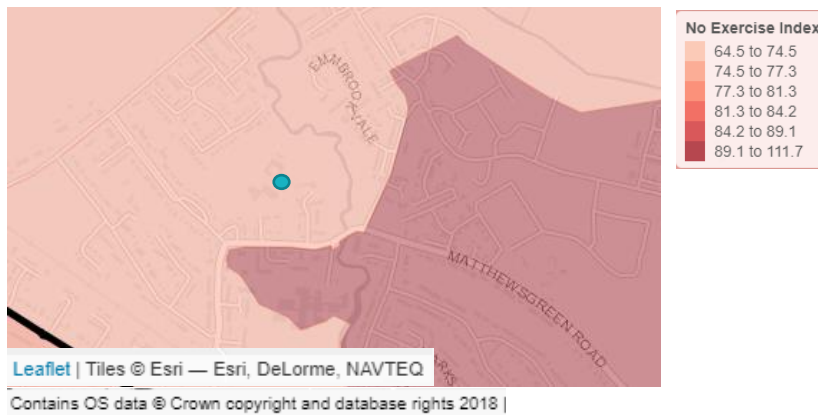
ADDITIONAL ACTIVE TRAVEL BARRIERS

Figure 27 - Emmbrook Jnr Bike Ownership Index



Bike ownership within the lower super output area (LSOA) covering Emmbrook Junior school is above average although residents of communities to the east are less likely to have their own bicycles.

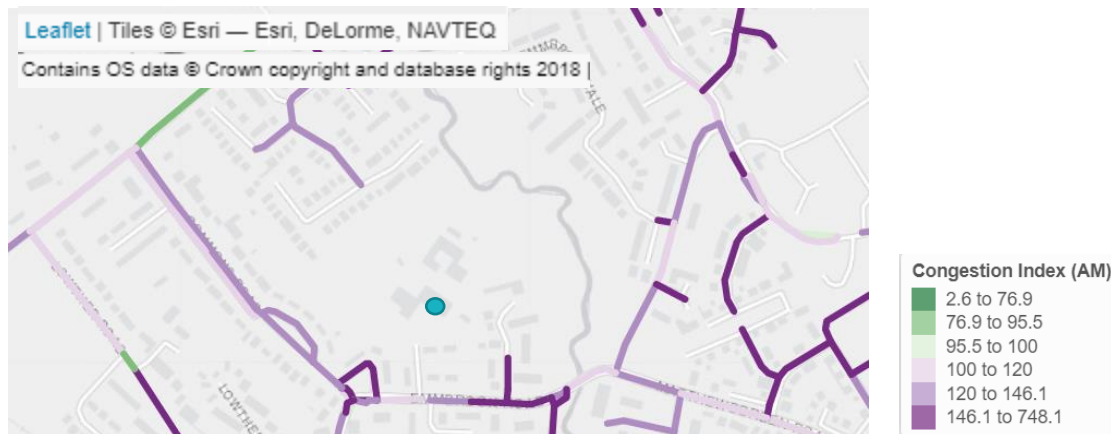
Figure 28 - Emmbrook Jnr Level of Exercise Index



This pattern is reflected in the No exercise index of Figure 28 that shows resident’s around the school and to the west are 25% or more likely to engage in exercise compared to the national norm whilst residents to the east are more reflective of the national average level of exercise undertaken.

Figure 29 shows that there is minimal difference between free-flowing average speeds and morning peak time average speeds on the roads around Emmbrook Junior School.

Figure 29 - Emmbrook Jnr Congestion Index (AM)



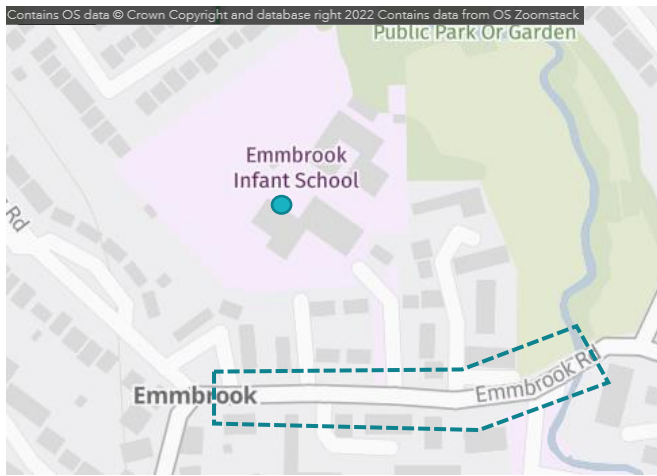
INFRASTRUCTURE RATING

Emmbrook Rd

As shown by the favoured active travel routes in Figure 22, Emmbrook Road would form part of all active travel journeys to and from Emmbrook Infants and Juniors and hence this is the area assessed using the Active Travel Tool (Figure 30). Assessment of the level of built-in safety reveals that the pedestrian footway represents a section of 5-star infrastructure.

There are two existing crossing points, a raised zebra crossing to the east and a signal-controlled crossing immediately outside the entrance to the Infants & Juniors. Both these types of crossing are also attributed a 5-star rating with low levels of traffic stress that are considered suitable for everyone, including children.

Figure 30 - Emmbrook Jnr Infrastructure Assessment



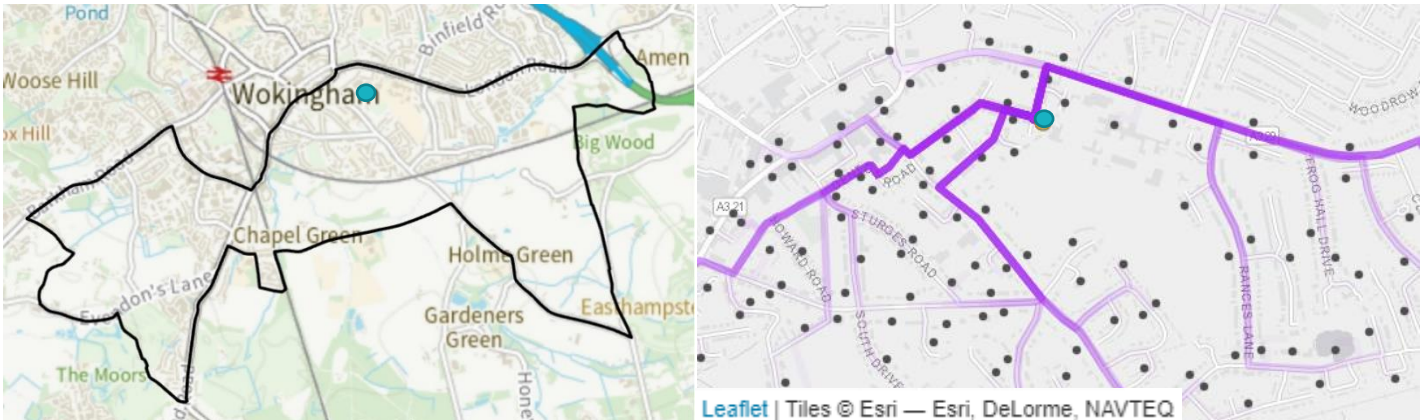
Pedestrian Footway	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
No physical segregation (0-1m)	★★★★★	Moderate stress

Pedestrian Crossing Type	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
Informal	★★★★★	Moderate stress
Traffic island	★★★★★	Low stress
Zebra (Unraised; no traffic island)	★★★★★	Moderate stress
Raised informal crossing without traffic island	★★★★★	Moderate stress
Unraised zebra with traffic island	★★★★★	Low stress
Raised informal crossing with traffic island	★★★★★	Low stress
Raised zebra without traffic island	★★★★★	Low stress
Raised zebra with traffic island	★★★★★	Low stress
Signal controlled (no traffic island)	★★★★★	Low stress
Signal controlled with traffic island	★★★★★	Low stress

WESTENDE JUNIOR SCHOOL

Figure 31 shows the location and catchment area for Westende Junior School. The active travel routes have been generated through the routing engine using postcode data for pupils attending both Westende Junior School and the nearby Westcott Infants although only Westende Junior School has been used as the end destination as it is older children of Years 5 & 6 that are more likely to be making independent travel journeys.

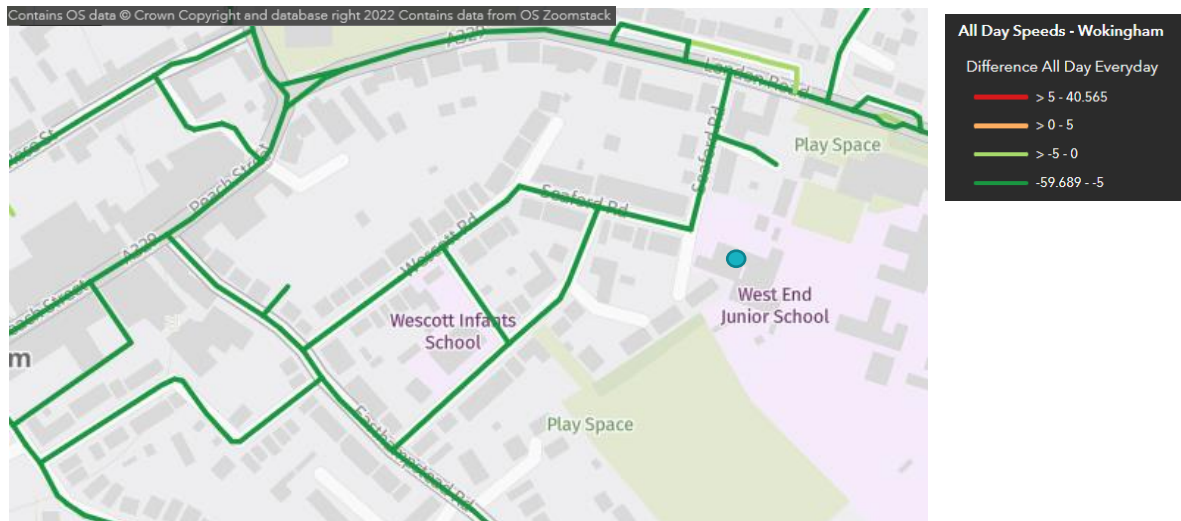
Figure 31 - Westende Jnr location & favoured active travel routes



TRAFFIC SPEED

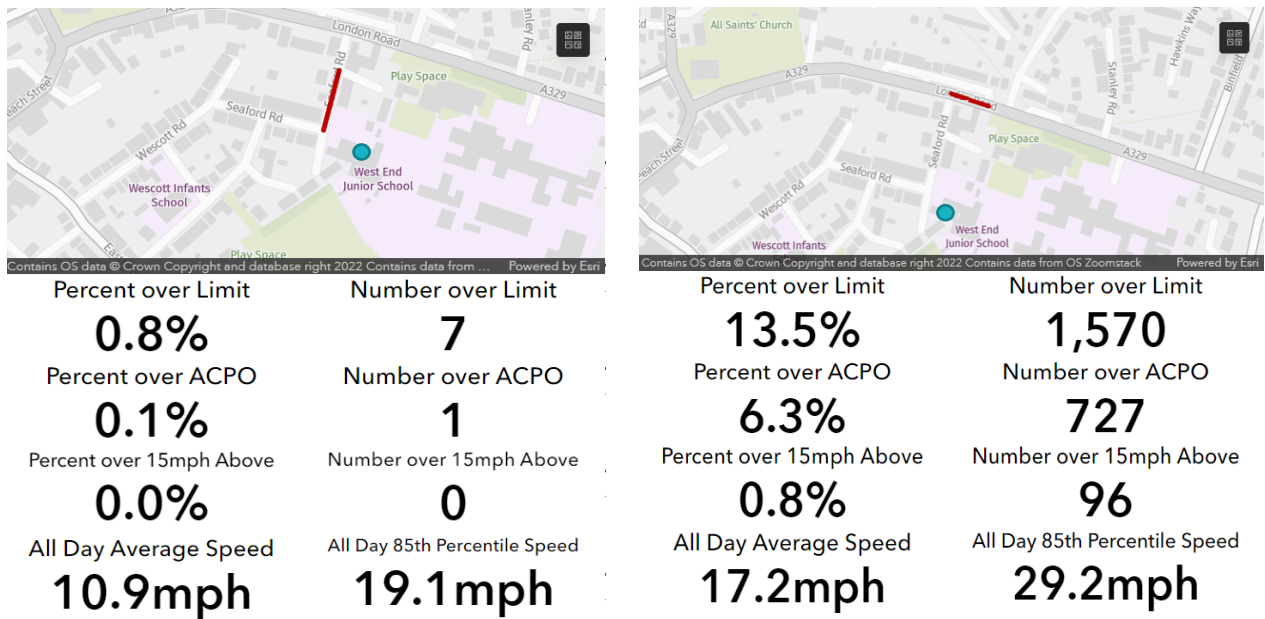
As shown in Figure 32, speeds around Westende Junior School are well within the posted speed limit of 30mph with all day average speeds more than 5mph below than the posted speed limit.

Figure 32 - Westende All day average speed compliance



All day average speeds on Seaford Road from which Westende School is accessed are significantly lower than the speed limit with average and 8th percentile speeds on London Road also below the speed limit (see Figure 33).

Figure 33 - Westende speed compliance by road section



TRAFFIC VOLUME

Traffic volumes on the roads immediately surrounding Westende School are also low with an average of less than 1,000 vehicles per day. London Road to the north is busier with 10,000 to 20,000 vehicles per day on average.

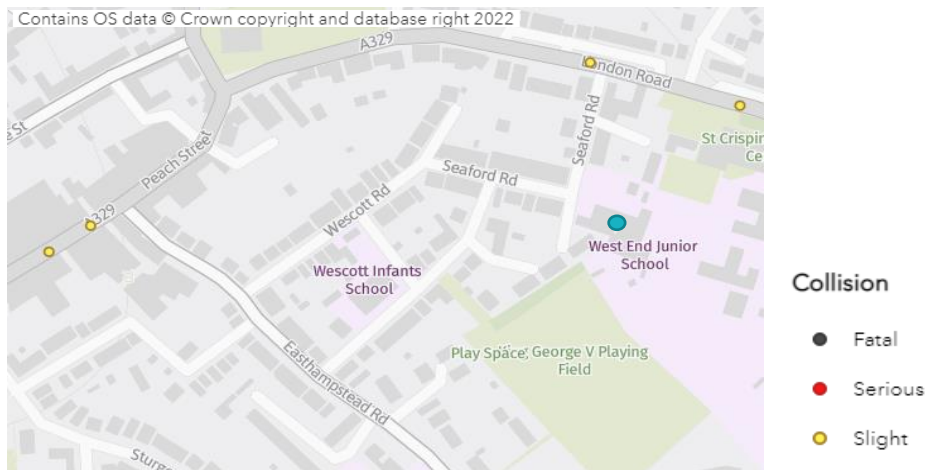
Figure 34 - Westende AADT levels



COLLISION HISTORY

There have been 4 reported injury collisions involving child pedestrians within the 5-year analysis period. On London Road 2 slight injury collisions involved children, although one occurred at a weekend so not during a school journey. The second collision involved an 11-year-old who could have been a pupil of Westende Juniors or the local secondary school. This collision was attributed contributory factors associated with the pedestrian of CF802 '[pedestrian] failed to look properly' and CF803 '[pedestrian] failed to judge vehicle's path or speed'.

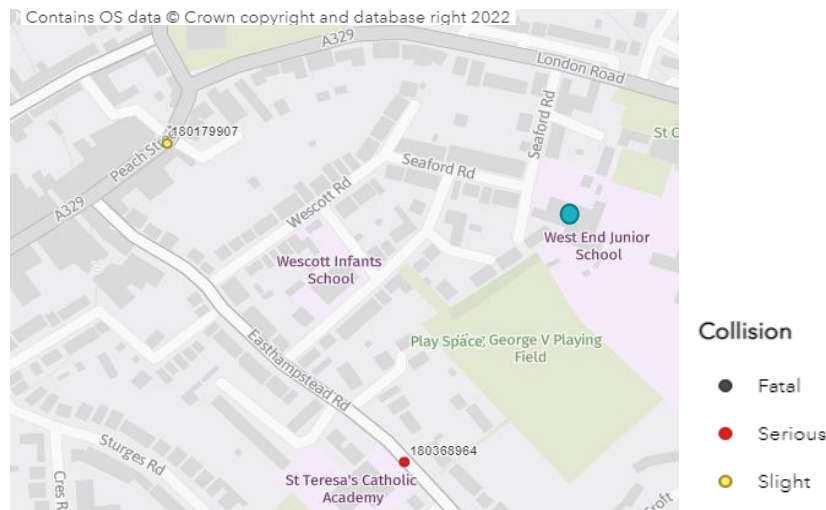
Figure 35 - Westende Child Pedestrian casualties (2017 - 2021)



Two further collisions occurred on Peach Street, one of which involved a child pedestrian where the driver disobeyed a traffic signal (CF304). The age of the second casualty is not recorded and based on the

collision description was unlikely to involve a child.

Figure 36 - Westende child pedal cyclist casualties (2017 – 2021)



During the same period, 2017 – 2021, there have been two reported injury collisions involving pedal cyclists, however the age of neither casualty has been captured so it is not possible to confirm whether they were under 16 years or not. No contributory factors were attributed to the collision

either offering any insight into the cause of the collisions.

ADDITIONAL ACTIVE TRAVEL BARRIERS

Data from the Active Streets Assessment Tool (ASAT) can offer further insight into potential barriers to active travel. Figure 37 shows that Bike Ownership around Westende Junior School is around average for the county. Residents living to the south of the school are more likely to have their own bicycles. The No exercise index shown in Figure 38 shows that the communities around Westende Junior School are more likely to engage in exercise which is consistent with the bike ownership levels.

Figure 37 - Westende Jnr Bike Ownership Index



Figure 38 - Westende Jnr Level of Exercise Index

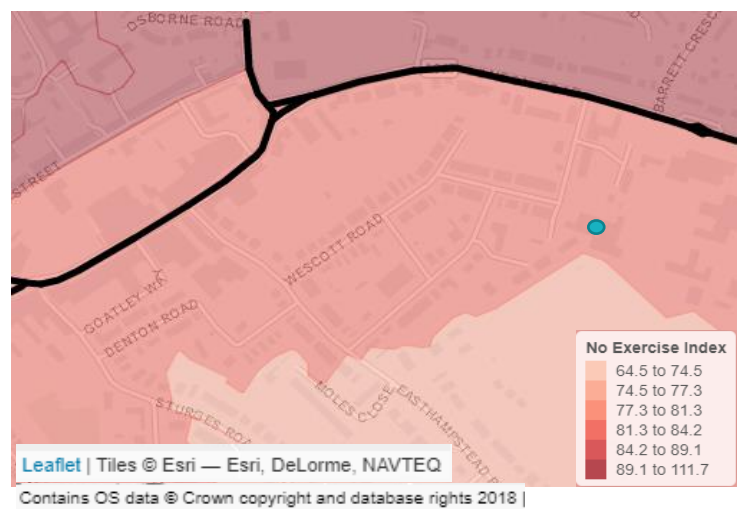
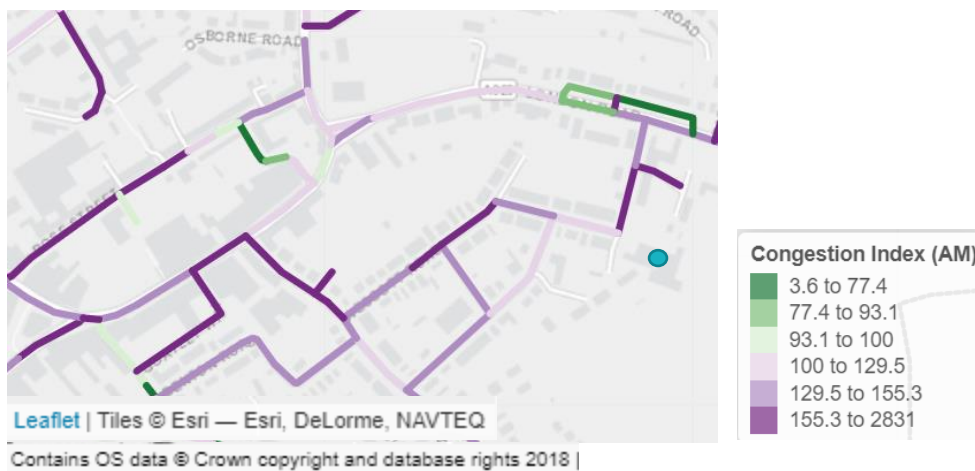


Figure 39 shows the level of congestion during the morning peak period on roads around Westende Junior School. The index values indicate that average speeds between 7-9am are lower than free-flowing (night-time) speeds and therefore journey times on these routes are likely to be longer because of congestion.

Figure 39 - Westende Jnr Congestion Index (AM)

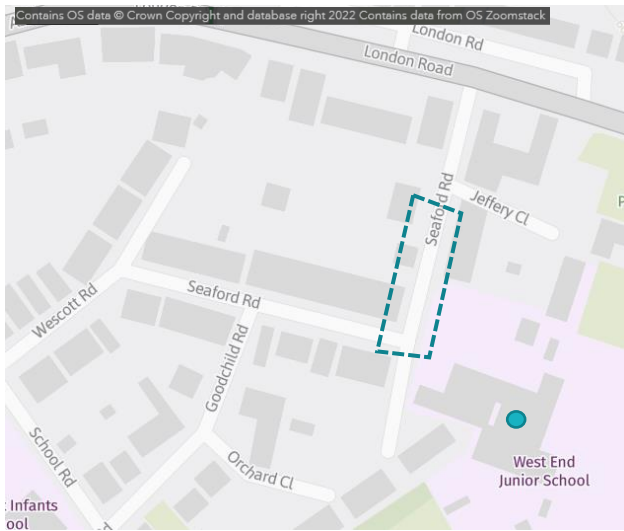


INFRASTRUCTURE RATING

Westende Junior School is situated on Seaford Road, which is a quiet, residential street. The low operating speeds seen in Figure 33 are reflected in the results of the Active Travel Tool assessment shown in Figure 40; the pedestrian footway is attributed a 4-star rating with moderate stress and all types of pedestrian crossing attributed either 4 or 5-star ratings.

Whilst there is no designated crossing point on Seaford Road at present the results of the assessment could be used as a factor in determining the most appropriate type of crossing were one to be provided.

Seaford Road
Figure 40 - Westende Infrastructure Assessment



Pedestrian Footway	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
No physical segregation (0-1m)	★★★★★	Moderate stress

Pedestrian Crossing Type	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
Informal	★★★★★	High stress
Traffic island	★★★★★	High stress
Zebra (Unraised; no traffic island)	★★★★★	Moderate stress
Raised informal crossing without traffic island	★★★★★	High stress
Unraised zebra with traffic island	★★★★★	Moderate stress
Raised informal crossing with traffic island	★★★★★	High stress
Raised zebra without traffic island	★★★★★	Moderate stress
Raised zebra with traffic island	★★★★★	Low stress
Signal controlled (no traffic island)	★★★★★	Moderate stress
Signal controlled with traffic island	★★★★★	Low stress

WINNERSH PRIMARY SCHOOL

Winnersh Primary School is located towards the north-west of Wokingham town. Figure 41 shows the school catchment area and favoured active travel routes based on pupil home postcodes. Winnersh Primary has two access points from the north and south of the school site and these have been captured in the routing engine.

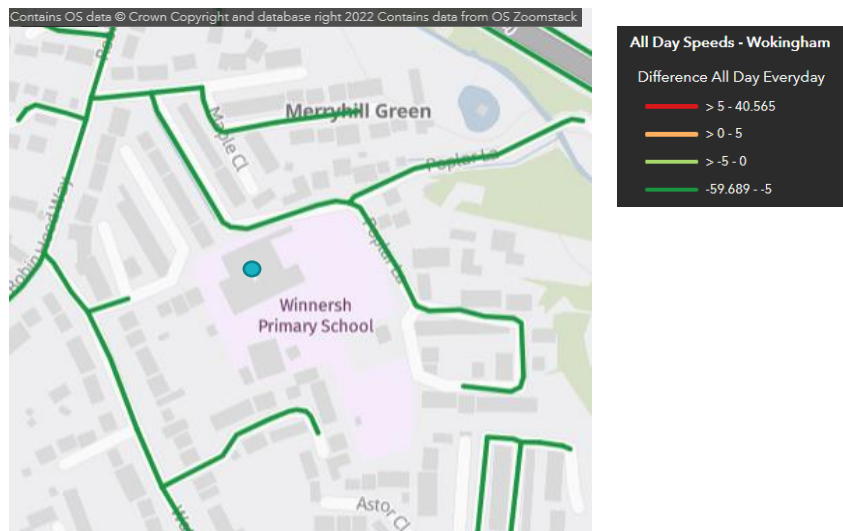
Figure 41 - Winnersh School location & favoured active travel routes



TRAFFIC SPEED

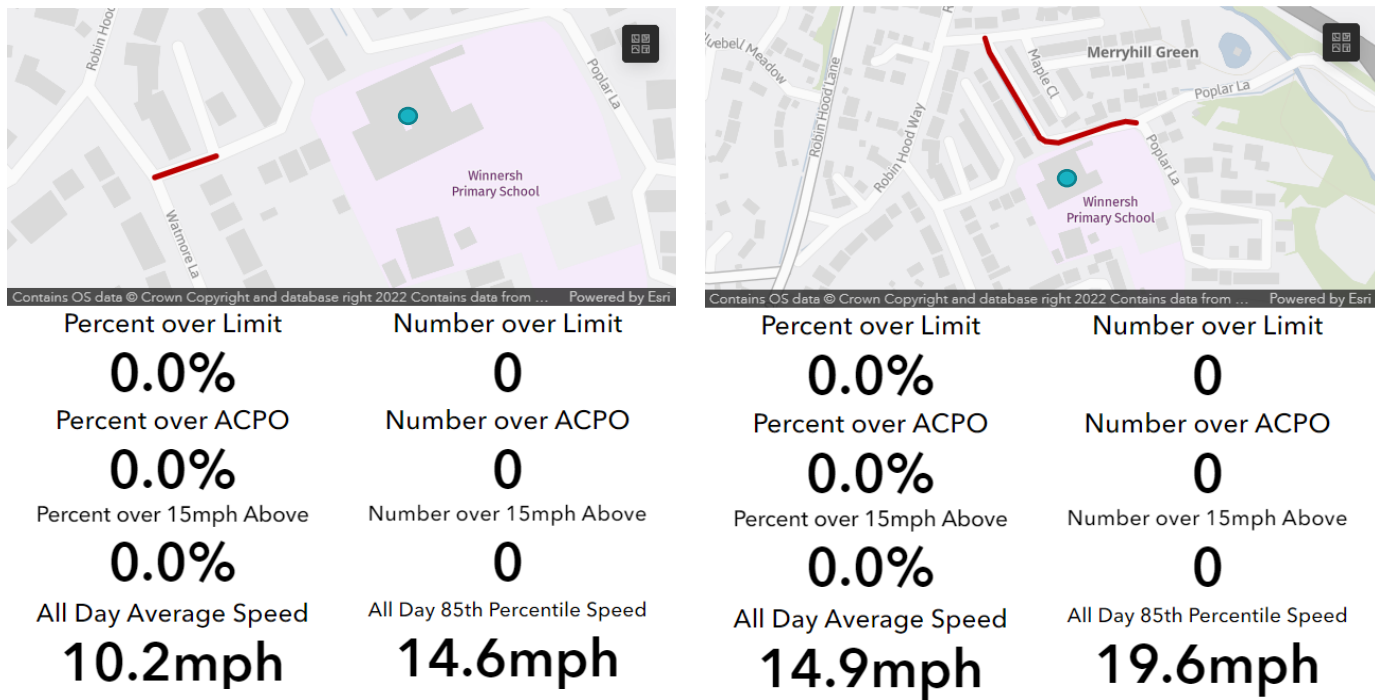
Data from the Speed Compliance Tool indicates there is good compliance with the posted speed limit of 30mph on the roads around Winnersh Primary..

Figure 42 - Winnersh All day average speed compliance



This is further verified in Figure 43 with speed data from Greenwood Grove and Poplar Lane where there is reportedly no vehicles travelling at speeds in excess of the posted speed limit and all day average speeds well below 30mph.

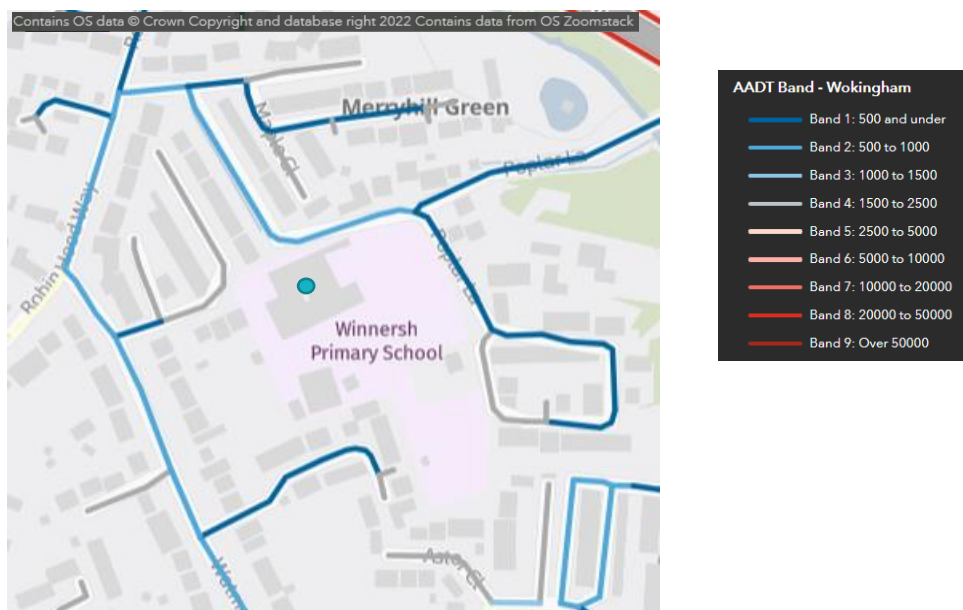
Figure 43 - Winnersh speed compliance by road sections



TRAFFIC VOLUME

Traffic volumes on roads around Winnersh Primary are equally low with most roads estimated to carry just 1,000 vehicles or less each day. With use limited to just residents and school-related traffic only traffic volumes on Greenwood Grove are estimated to be very low, insufficient to generate modelled AADT levels.

Figure 44 - Winnersh AADT levels



COLLISION HISTORY

None of the 111 reported resident child casualties injured in Wokingham between 2017 and 2021 were injured near Winnersh Primary, as confirmed by the CrashMap Local excerpt in Figure 45.

Figure 45 - Winnersh CrashMap excerpt



ADDITIONAL ACTIVE TRAVEL BARRIERS

Using socio-demographic data from the Census it is possible to understand characteristics of communities. The community around Winnersh Primary has a higher than average bike ownership index score with index scores more than 20% above the national norm.

Figure 46 - Winnersh Bike Ownership Index

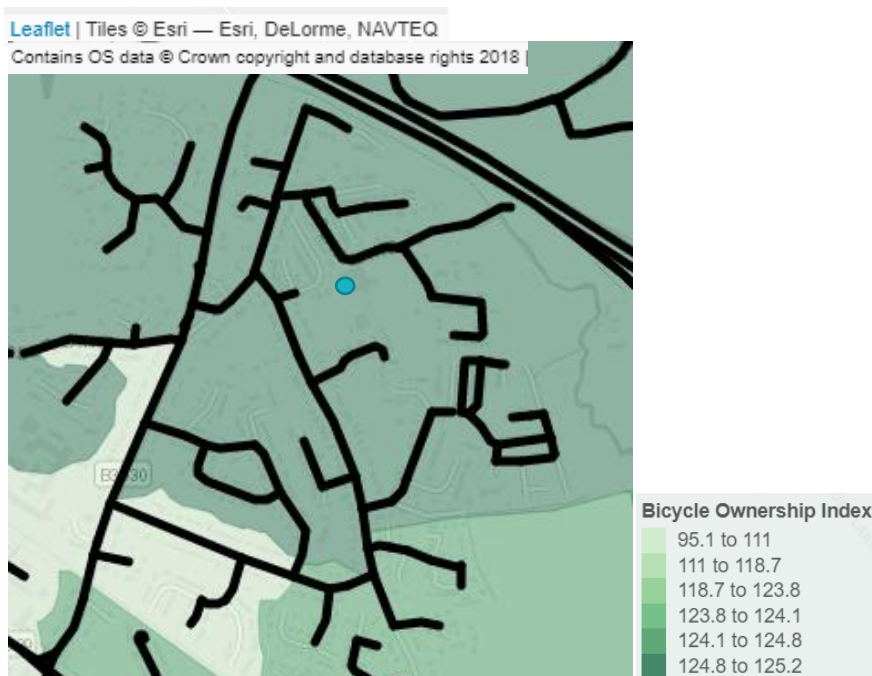
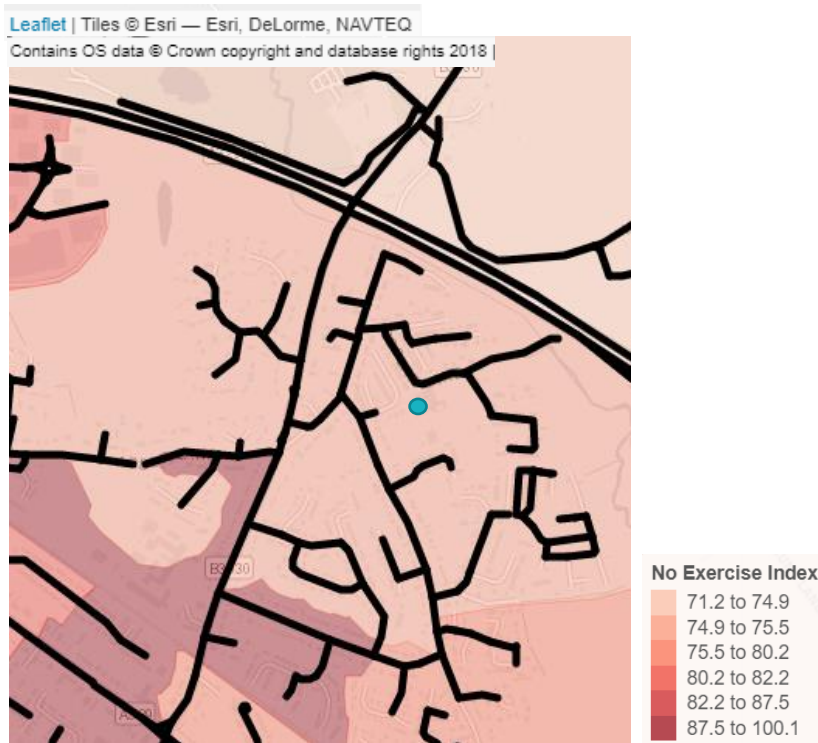


Figure 47 - Winnersh Level of Exercise Index



Inversely the level of no exercise illustrated in Figure 47 is approximately 25% lower than the national average, which is consistent with the bike ownership levels detailed previously.

Given the low traffic volumes seen previously on roads around Winnersh Primary it is unsurprising that there is therefore little congestion during the morning peak period. As shown in Figure 48 there is little difference between average speeds during the 7-9am peak and free-flowing, night-time speeds.

Figure 48 - Winnersh Congestion Index (AM)



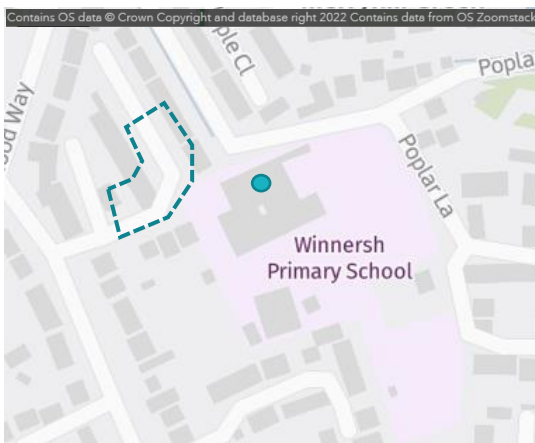
INFRASTRUCTURE RATING

Winnersh Primary has two points of access for pupils, one from Greenwood Grove and one from Poplar Lane. Both of these areas have been assessed using the Active Travel Tool.

Greenwood Grove

Despite the low traffic speeds the pedestrian footway is given a 3-star rating with moderate stress and potential pedestrian crossing types ranging between 3 and 5-star ratings. At this site the restricted visibility associated with the road alignment and permitted roadside parking are significant factors influencing these scores.

Figure 49 - Winnersh Infrastructure Assessment Area 1



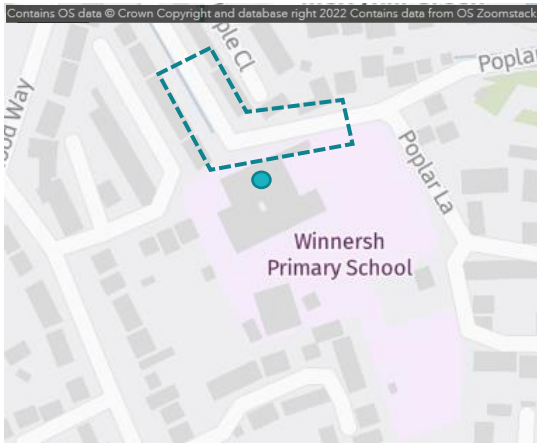
Pedestrian Footway	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
No physical segregation (0-1m)	★★★★☆	Moderate stress


Pedestrian Crossing Type	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
Informal	★★★★☆	High stress
Traffic island	★★★★☆	High stress
Zebra (Unraised; no traffic island)	★★★★☆	Moderate stress
Raised informal crossing without traffic island	★★★★☆	High stress
Unraised zebra with traffic island	★★★★☆	Moderate stress
Raised informal crossing with traffic island	★★★★☆	High stress
Raised zebra without traffic island	★★★★☆	Moderate stress
Raised zebra with traffic island	★★★★☆	Low stress
Signal controlled (no traffic island)	★★★★★	Moderate stress
Signal controlled with traffic island	★★★★★	Low stress

Poplar Lane

Poplar lane is the second area to be assessed although only the pedestrian footway category has been assessed due to the high unlikelihood of a formal pedestrian crossing being installed on this route. Given the attributes of this route the pedestrian footway is given a 4-star rating with a level of traffic stress that most adults will tolerate.

Figure 50 - Winnersh Infrastructure Assessment Area 2

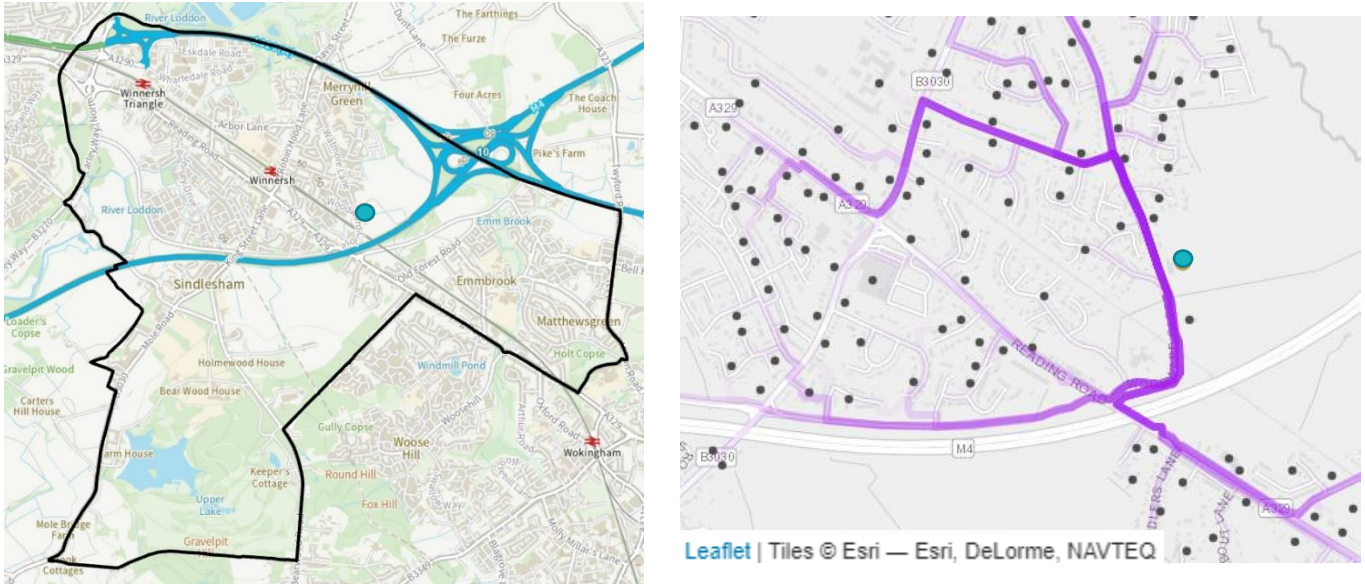


Pedestrian		
Pedestrian Footway	Star Rating	Level of Traffic Stress evaluation
No physical segregation (0-1m)	★★★★☆	 Moderate stress

WHEATFIELD PRIMARY SCHOOL

Wheatfield Primary School is located to the north of the M4 corridor within Wokingham. Figure 51 shows the school catchment area and the favoured active travel routes to and from the school based on pupil home postcodes.

Figure 51 - Wheatfield school location & favoured active travel routes



TRAFFIC SPEED

Data from Wokingham’s Speed Compliance Tool (shown in Figure 52) indicates that traffic speeds on roads around Wheatfield Primary are consistently compliant with the posted speed limits. On Woodward Close, the approach road to Wheatfield Primary, speeds are significantly lower than the posted speed limit; compared to the speed limit of 30mph all day average speeds are almost half that at 16mph. As indicated by Figure 53, only 7 vehicles were estimated to exceed the speed limit in any 24hour period.

Figure 52 - Wheatfield All day average speed compliance

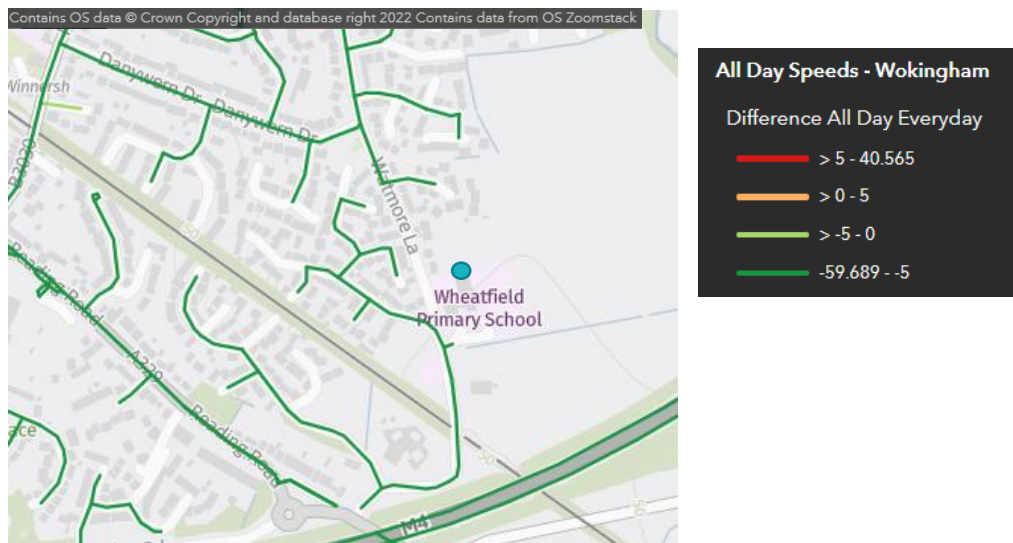
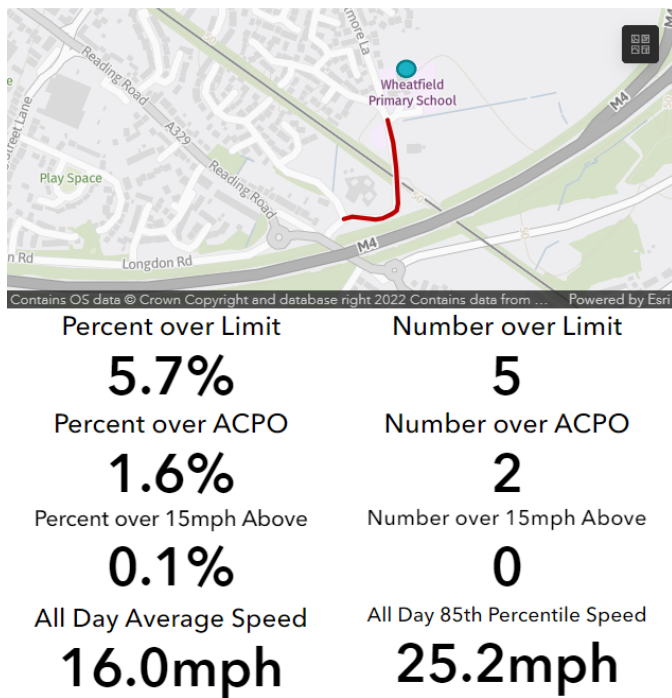


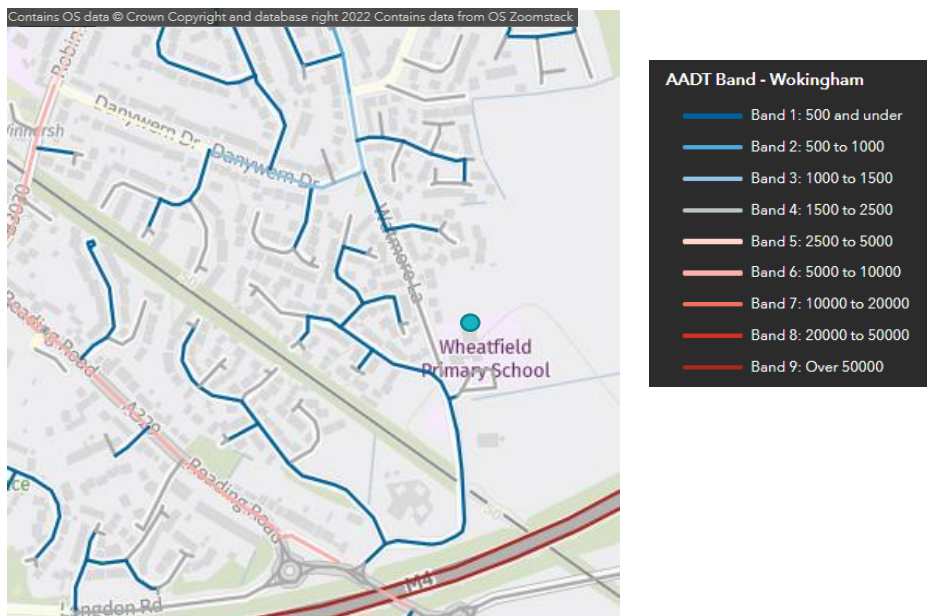
Figure 53 - Wheatfield speed compliance by road section



TRAFFIC VOLUME

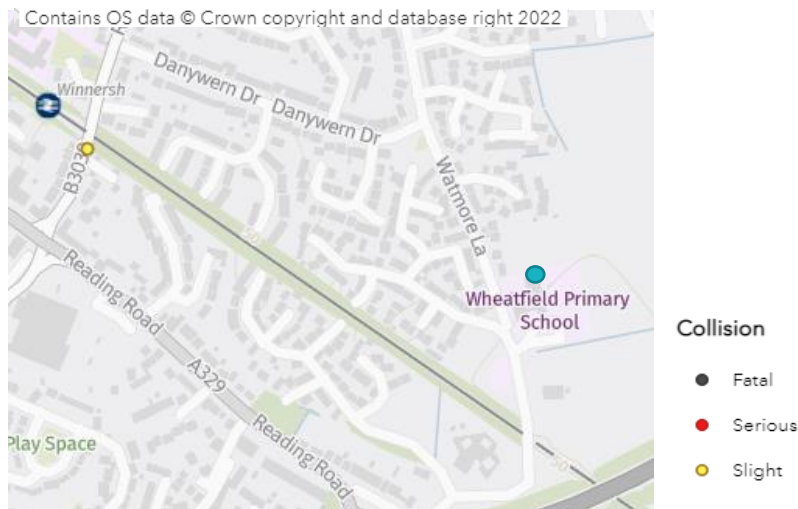
Traffic volumes around the school are also consistently low. Of the most favoured active travel routes to and from the school Danywern Drive to the north carries the highest volume of traffic although the annual average daily traffic is estimated at just 1,500 – 2,500 vehicles.

Figure 54 - Wheatfield AADT levels



COLLISION HISTORY

Figure 55 - Wheatfield Pedestrian Child Casualties (2017 – 2021)



There has been one reported injury collision resulting in a slight injury to a child pedestrian during the 5-year analysis period. However, in this instance the casualty was of secondary age so unlikely to have been journeying to or from Wheatfield Primary. No contributory factors were attributed to this collision.

Figure 56 - Wheatfield Pedal Cyclist Child Casualties (2017 - 2021)

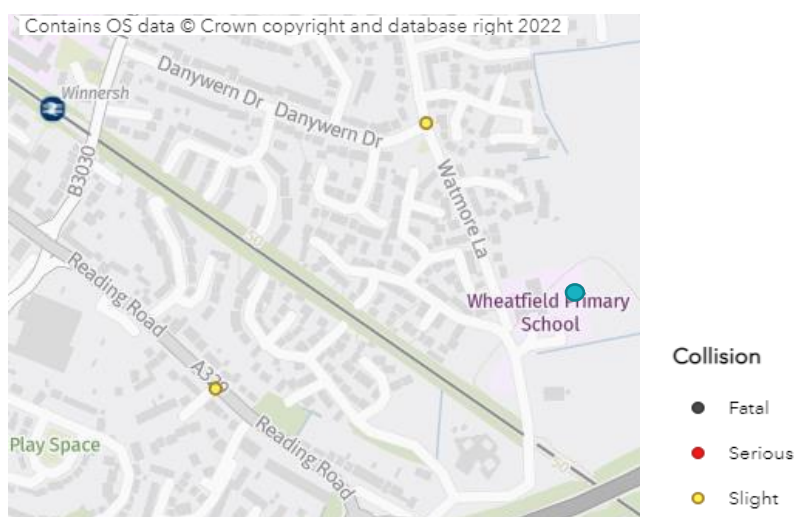


Figure 56 shows that there have been 2 collisions involving pedal cyclists although in only one collision record, at the junction of Danywern Drive and Watmore Lane, is the age of the casualty confirmed as under 16. In this instance the collision occurred on a weekday at 4pm so could have involved a school-related journey. Again no contributory factors were attributed to either collision involving pedal cyclists.

contributory factors were attributed to either collision involving pedal cyclists.

ADDITIONAL ACTIVE TRAVEL BARRIERS

With 100-based indices, a value of 100 represents the national average level of bike ownership. As shown in Figure 57, the community around Wheatfield Primary has higher than average bike ownership levels with index values of 18 – 23% above the national norm.

Conversely the level of exercise index in Figure 58 shows that for residents living immediately around the school, their propensity to exercise is higher than average although areas to the west where some pupils of Wheatfield live the no exercise index value is closer to the national norm indicating less likelihood for these residents to engage in exercise.

Figure 57 - Wheatfield Bike Ownership Index

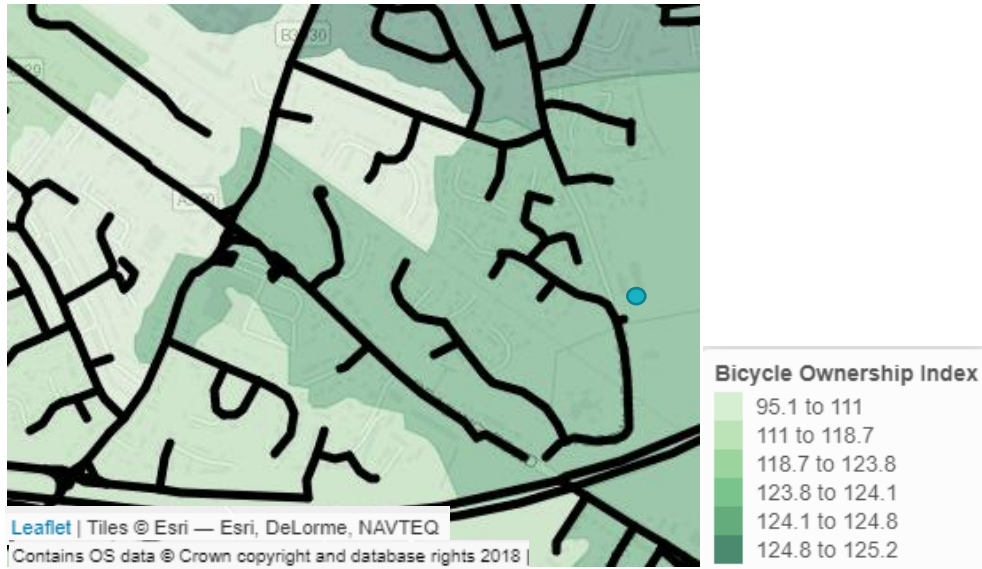


Figure 58 - Wheatfield Level of Exercise Index

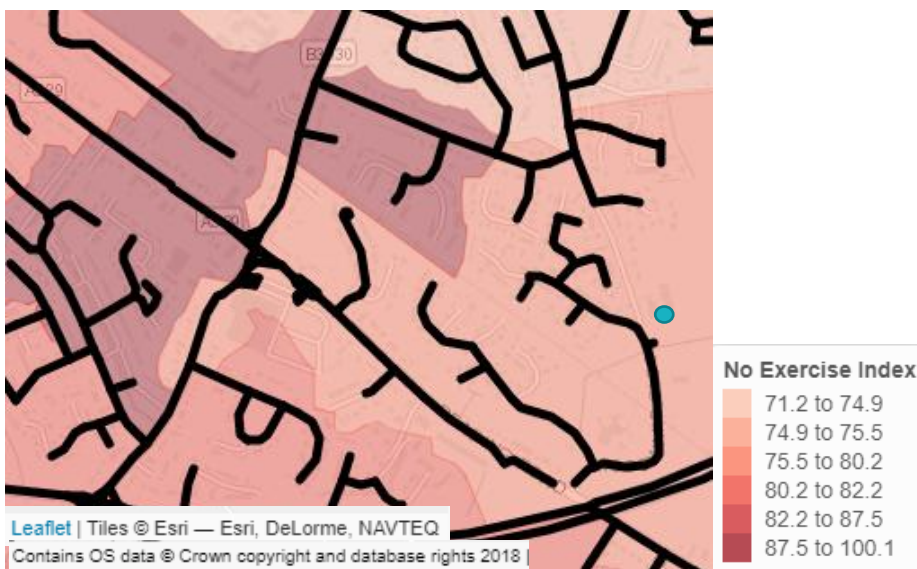
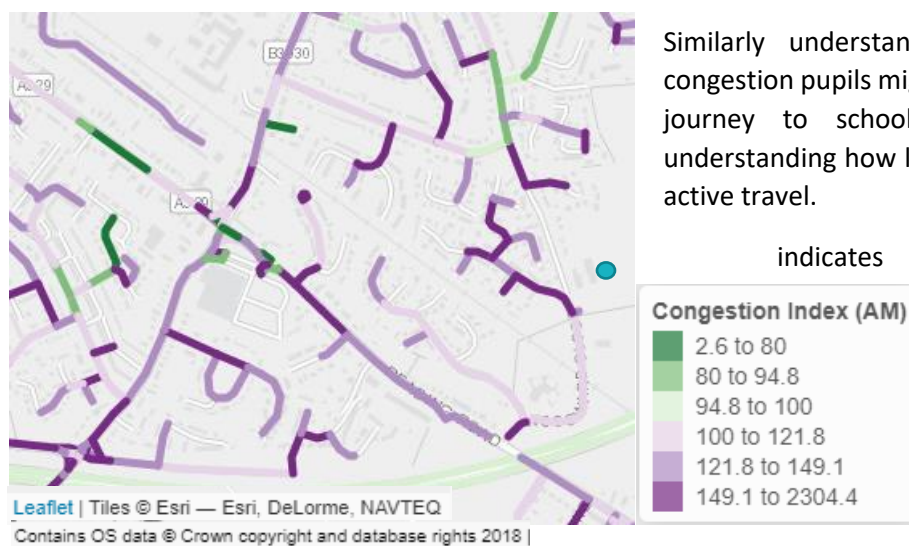


Figure 59 - Wheatfield Congestion Index (AM)



Similarly understanding what levels of congestion pupils might experience on their journey to school is also useful in understanding how likely they are to adopt active travel.

indicates that the levels of congestion on the approach road to Wheatfield Primary are low with little difference between free-flowing (night-time) speeds and all

day average speeds. Woodward Close just beyond the school is estimated to experience higher congestion, likely to be as a result of school-related traffic interacting with residential traffic and pedestrians walking into and out of the school site.

INFRASTRUCTURE RATING

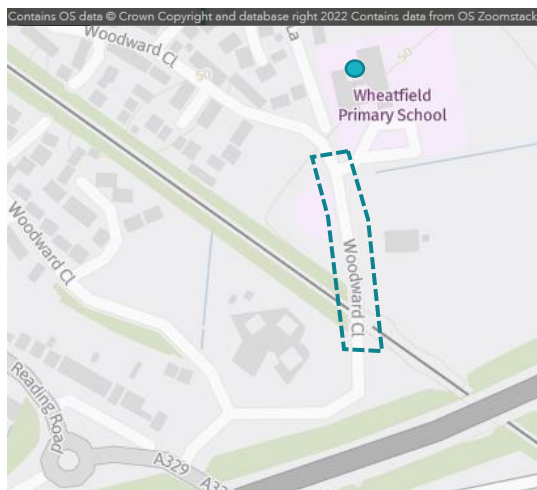
Using the Active Travel Tool basic descriptors and attributes relating to the infrastructure outside Wheatfield Primary have been adjusted to most closely reflect the area’s characteristics.

Woodward Close

The outcomes of the iRAP assessment give the pedestrian footway on Woodward Close a 4-star rating and a moderate level of traffic stress, this is defined as a level of stress most adults will tolerate.

There is an informal crossing point just north of the school entrance which has also been given a 4-star rating but a high level of traffic stress. Figure 60 shows the star ratings attributed to a range of crossing types for the assessed area, upgrading the crossing to a raised zebra, without a traffic island would improve it to a 5-star rating and reduce the level of stress to moderate.

Figure 60 - Wheatfield Infrastructure Assessment



Pedestrian Crossing Type	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
Informal	★★★★☆	High stress
Traffic island	★★★★☆	High stress
Zebra (Unraised; no traffic island)	★★★★☆	Moderate stress
Raised informal crossing without traffic island	★★★★☆	High stress
Unraised zebra with traffic island	★★★★★	Moderate stress
Raised informal crossing with traffic island	★★★★★	High stress
Raised zebra without traffic island	★★★★★	Moderate stress
Raised zebra with traffic island	★★★★★	Low stress
Signal controlled (no traffic island)	★★★★★	Moderate stress
Signal controlled with traffic island	★★★★★	Low stress

Pedestrian Footway	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
No physical segregation (0-1m)	★★★★☆	Moderate stress

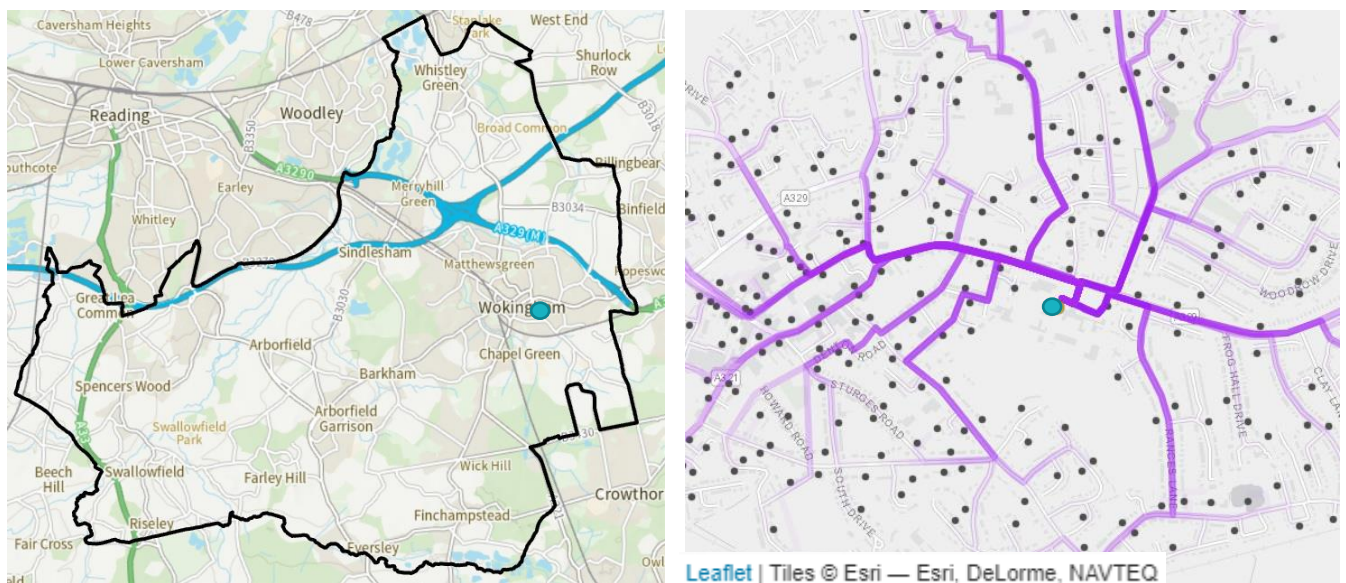
Research into independent travel barriers identified that “Some parents think primary age children are not ready to travel to school independently due to their young age and lack of practical skills.”¹ Children attending secondary school are however often considered more able and responsible to travel to school independently, despite Wokingham’s collision statistics indicating that as age increases, particularly between 11-13 years, risk of injury increases.

Having looked at the infrastructure around Primary Schools across the authority the report will now examine transport related data, driver behaviour and review the level of ‘built-in’ safety within existing infrastructure around four secondary schools within Wokingham to see how the evidence differs to Primary Schools. In understanding the differences (or not as the case may be) this might help in breaking down barriers to independent travel for primary age children.

ST CRISPINS SECONDARY SCHOOL

St Crispins Secondary School is located to the east of the town centre and unsurprisingly it has a larger catchment area, shown in Figure 61, compared to the previously examined primary schools. As a result the favoured active travel routes cover a wider area as pupils walking and cycling congregate on their journeys.

Figure 61 - St Crispins school location & favoured active travel routes



TRAFFIC SPEED

All day average traffic speeds are consistently below the speed limit across the catchment area for St Crispins indicating good compliance with the 30mph speed limit.

Focusing on London Road either side of the entrance to the secondary school, Figure 63 shows that all day average speeds are around 20mph with operating speeds (85th percentile speeds) closer to, but below 30mph. Approximately 12% of vehicles travelling along London Road during the day are estimated to be exceeding the speed limit.

¹ Dr H Hope Smith & L Kruminia, Active Travel in West Berkshire 2022

Figure 62 - St Crispins All day average speed compliance

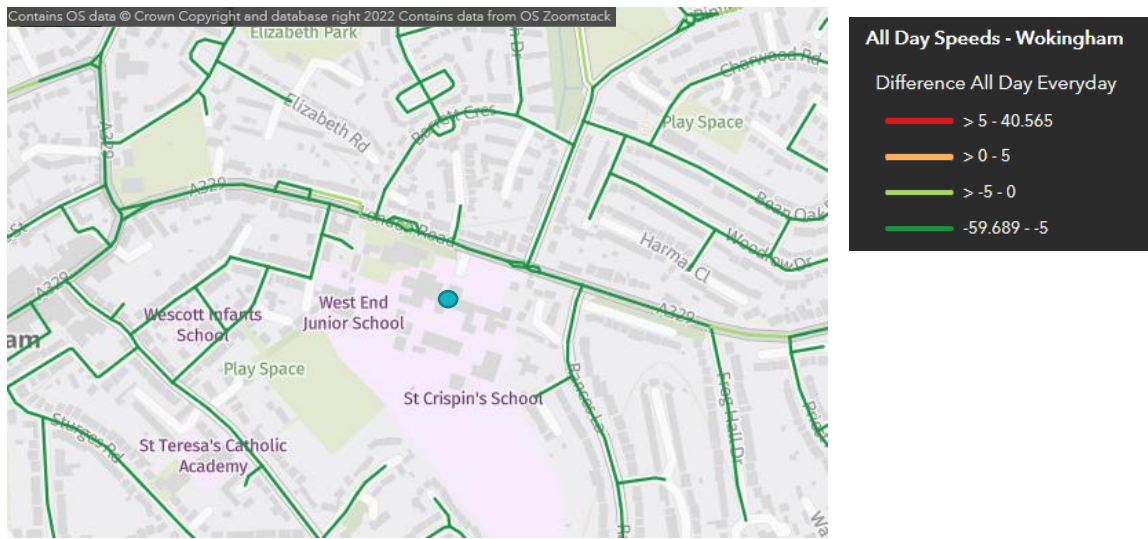


Figure 63 - St Crispins speed compliance by road section



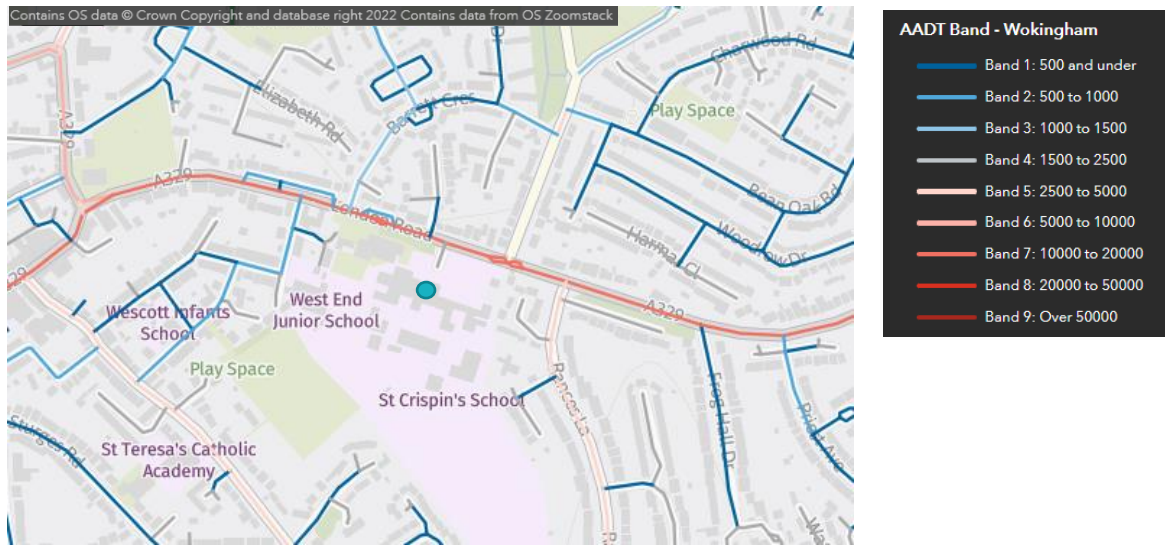
Percent over Limit	Number over Limit
12.5%	1,694
Percent over ACPO	Number over ACPO
5.1%	697
Percent over 15mph Above	Number over 15mph Above
0.5%	64
All Day Average Speed	All Day 85th Percentile Speed
18.0mph	28.8mph

Percent over Limit	Number over Limit
11.0%	1,487
Percent over ACPO	Number over ACPO
2.1%	279
Percent over 15mph Above	Number over 15mph Above
0.0%	2
All Day Average Speed	All Day 85th Percentile Speed
22.5mph	28.8mph

TRAFFIC VOLUME

London Rd, from which St Crispins is directly accessed, is the busiest road that pupils navigate on their journey to and from school with an average daily traffic volume of 10,000 to 20,000 vehicles. Residential distributors leading off London Rd are estimated to carry 2,500 – 5,000 vehicles per day but many other routes pupils would walk or cycle along are estimated to carry 1,500 vehicles or less.

Figure 64 - St Crispin AADT levels



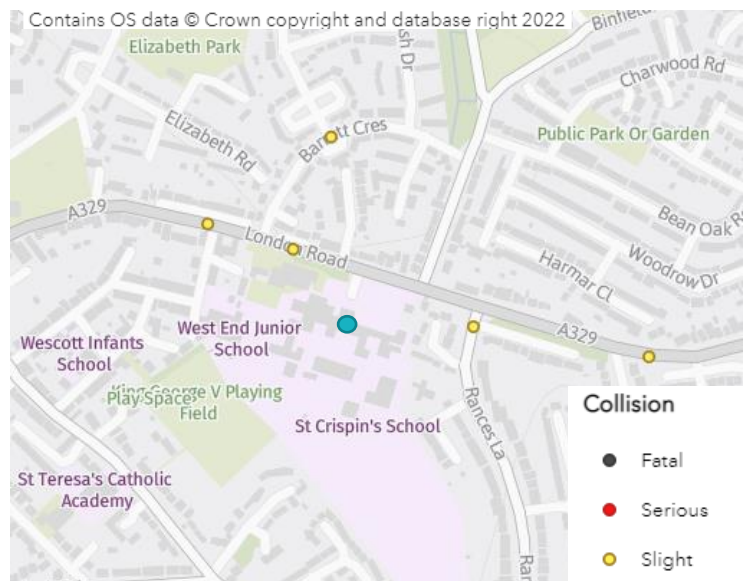
COLLISION HISTORY

Figure 65 - St Crispins Pedestrian child casualties (2017 – 2021)

Figure 65 shows those collisions that have occurred within the vicinity of St Crispins between 2017 and 2021, all of which involved a child pedestrian. During this same time there have been no recorded collisions involving child pedal cyclists.

All of the 5 collisions have involved the pedestrian crossing the carriageway away from any crossing facility and based on the date and age of the casualty involved 2 of the 5 casualties could have been journeying to or from school.

A number of contributory factors (CFs) have been attributed to the collision circumstances however consistently all 5 pedestrians were attributed with CF802 '[pedestrian] failed to look properly'. 2 casualties injured on London Road were masked by queuing or stationary vehicles.



ADDITIONAL ACTIVE TRAVEL BARRIERS

Bike Ownership around St Crispins is variable with below average ownership to the north and west of the school and above average ownership levels to the south, see Figure 66.

Inversely the level of no exercise, shown in

Figure 67, is higher to the north and lower to the south, confirming again the relationship between bike ownership and propensity to exercise.

Figure 66 - St Crispin Bike Ownership Index



Figure 67 - St Crispin Level of Exercise Index

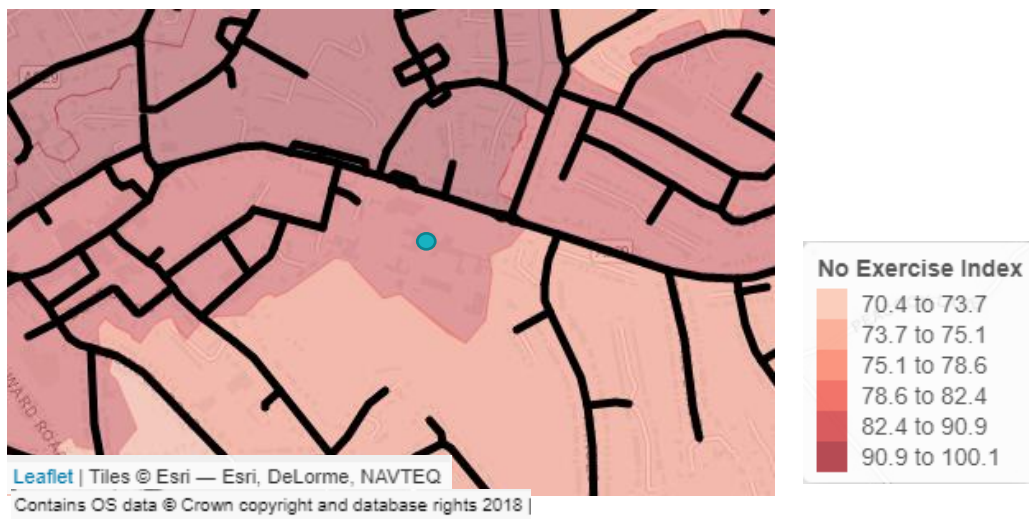
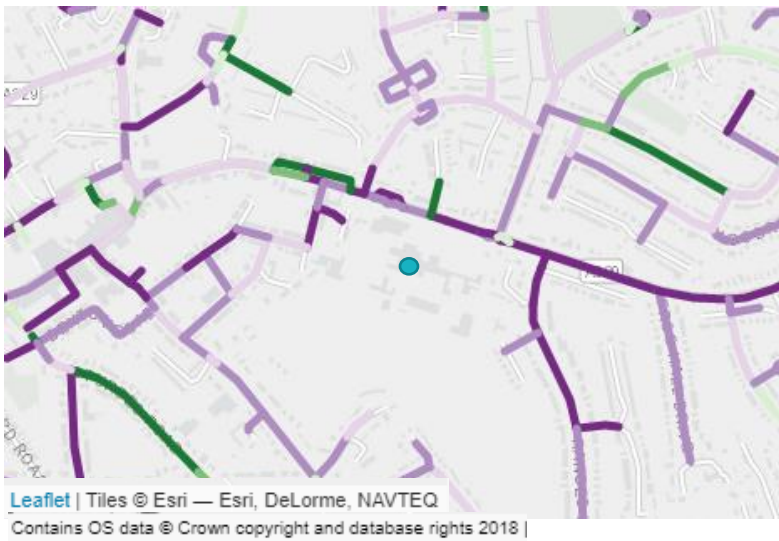


Figure 68 - St Crispin Congestion index (AM)



There is indication of some congestion on London Road during the morning peak due to greater differences between night-time free flowing average speeds and average speeds between 7-9am. With a congestion index value of 180 this indicates morning peak speeds are nearly half those of

night-time average speeds.

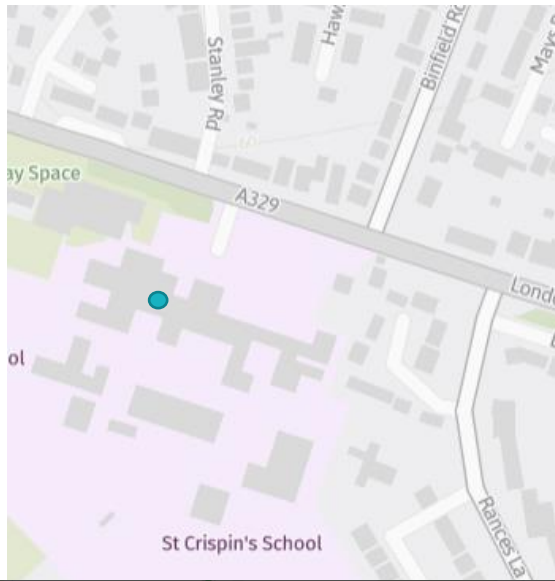
INFRASTRUCTURE RATING

A329, London Road

There are no shared or segregated cycle facilities on London Road so these 2 categories of active travel have not been assessed. However based on the characteristics of the infrastructure present the pedestrian footway has been scored as 4-star with the level of traffic stress seen typically in an urban environment of moderate.

The existing signal-controlled crossing at the junction with Binfield Road is given a 5-star rating and attributed a low level of traffic stress.

Figure 69 - St Crispins Infrastructure Assessment



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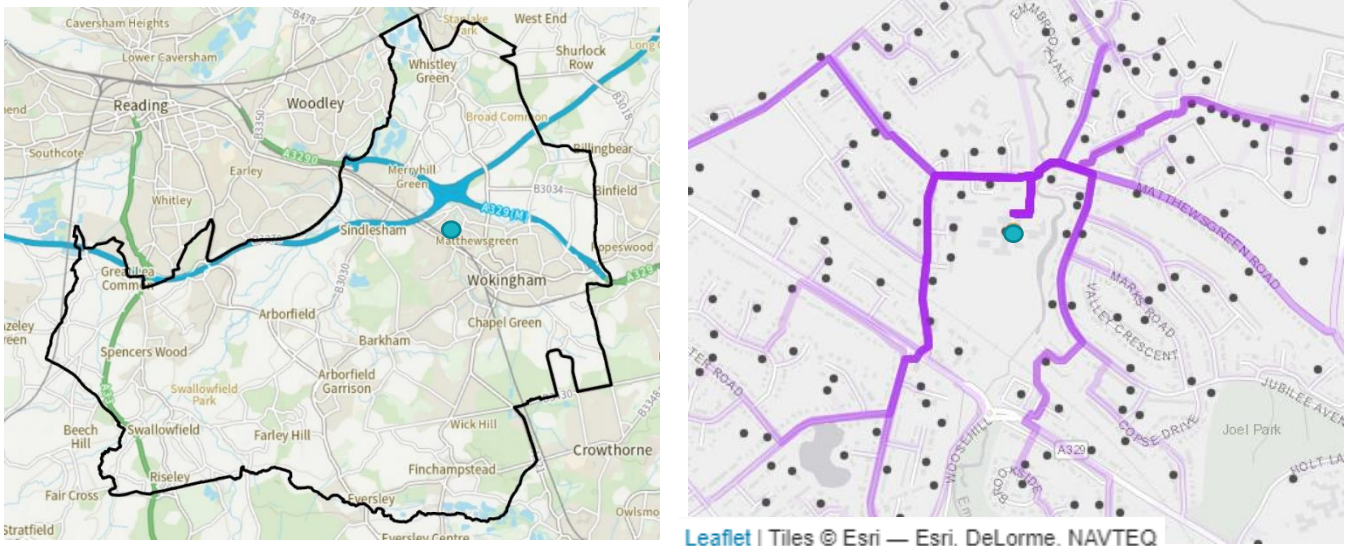
Pedestrian Footway	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
No physical segregation (0-1m)	★★★★☆	Moderate stress

Pedestrian Crossing Type	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
Informal	★★★★★	High stress
Traffic island	★★★★☆	High stress
Zebra (Unraised; no traffic island)	★★★★☆	Moderate stress
Raised informal crossing without traffic island	★★★★☆	High stress
Unraised zebra with traffic island	★★★★☆	Moderate stress
Raised informal crossing with traffic island	★★★★★	High stress
Raised zebra without traffic island	★★★★★	Moderate stress
Raised zebra with traffic island	★★★★★	Low stress
Signal controlled (no traffic island)	★★★★★	Moderate stress
Signal controlled with traffic island	★★★★★	Low stress

EMMBROOK SENIOR SCHOOL

Emmbrook Senior School, located to the north of the town has the same catchment area as St Crispins although the geographical distribution of pupils is quite different. Emmbrook Senior is located opposite Emmbrook Infants & Junior school previously reviewed in this report. As seen in Figure 70, given the larger volume of pupils attending the school, the favoured routes for walking or cycling to school cover a wider area than those for the Infant & Junior school.

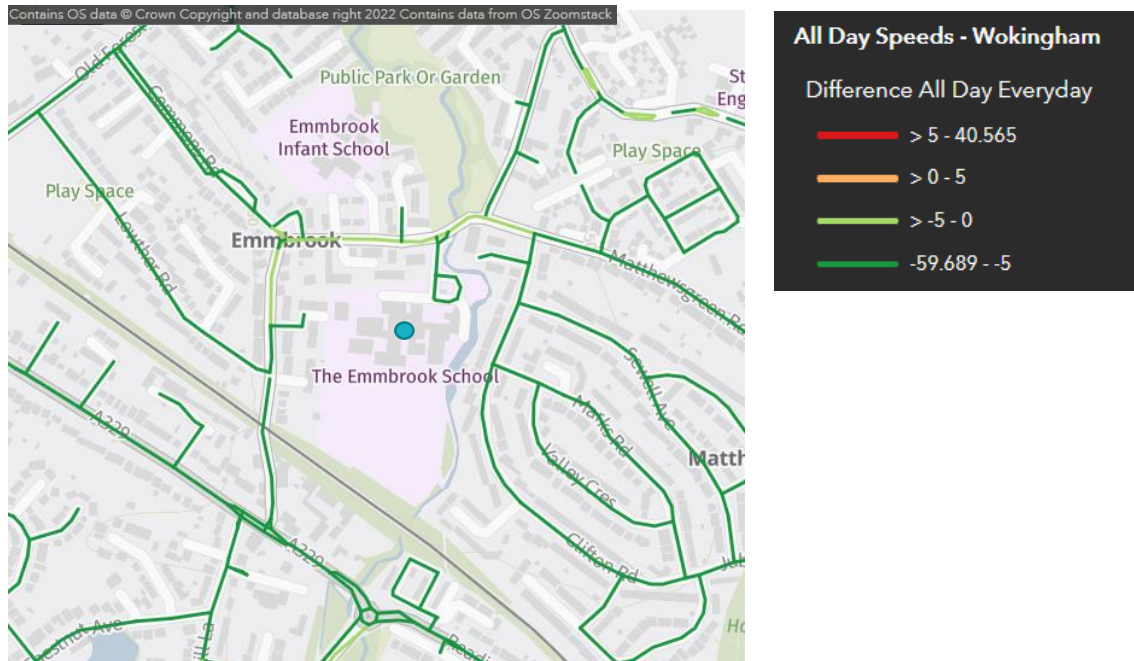
Figure 70 - Emmbrook Senior location & favoured active travel routes



TRAFFIC SPEED

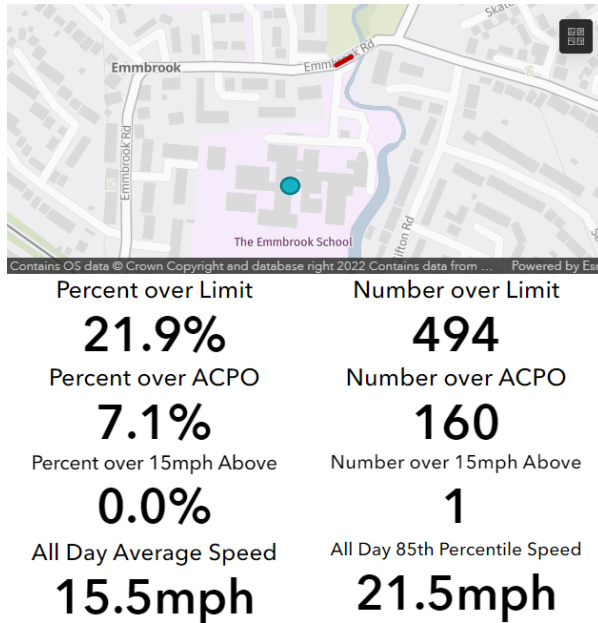
Traffic speeds around the residential area of Emmbrook are low. Parts of the network in the immediate vicinity of the school are subject to a 20mph zone and others have a 30mph speed limit. Throughout the area there is a negative difference between all day average speeds and the respective posted speed limit indicating good compliance although the difference is smaller on routes subject to 20mph.

Figure 71 - Emmbrook Snr All day average speed compliance



Specific speed compliance data for the section of Emmbrook Road immediately outside the secondary school reveals all day average speeds of 15.5mph and 85th percentile speeds of 21.5mph.

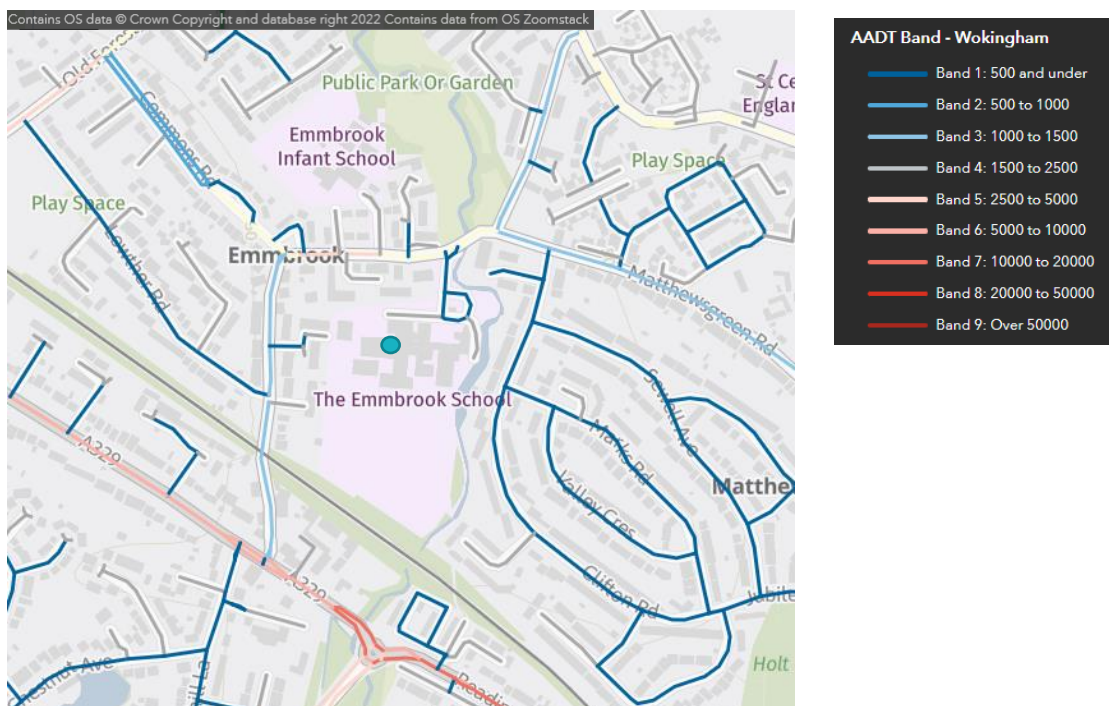
Figure 72 - Emmbrook Snr speed compliance by road section



TRAFFIC VOLUME

Like speeds, traffic volumes around Emmbrook are generally low with few routes estimated to carry more than 2,500 vehicles per day. Traffic volumes on Emmbrook Road outside the school are higher and this is likely to be as a result of the school-related traffic peaks.

Figure 73 - Emmbrook Snr AADT levels



COLLISION HISTORY

Figure 74 - Emmbrook Snr pedal cyclist child casualties



Interrogation of Wokingham's CrashMap system reveals that between 2017 and 2021 there have been no collisions involving child pedestrians in the vicinity of Emmbrook Secondary School. However there have been 2 slight injury collisions involving child pedal cyclists on the A329 to the south of the school, as shown in Figure 74. Whilst one of these collisions involved a casualty of primary school age the second involved a 15 year old who may have been making a school related journey. The only contributory factor attributed to the collision was CF310 'cyclist entering road from pavement'

ADDITIONAL ACTIVE TRAVEL BARRIERS

Figure 75 - Emmbrook Snr Bike Ownership Index



Figure 75 shows that there is a marked difference in bike ownership between communities living to the west and east of Emmbrook Senior school. Residents living towards Winnersh (west) are approximately 20% more likely to own a bike compared to the national norm with residents to the east in Wokingham Town slightly less likely to have access to their own bike than would be typically found across Great Britain.

Unsurprisingly the propensity to exercise index in Figure 76 shows the inverse relationship between bike ownership and engagement in exercise.

Figure 76 - Emmbrook Snr Level of Exercise Index

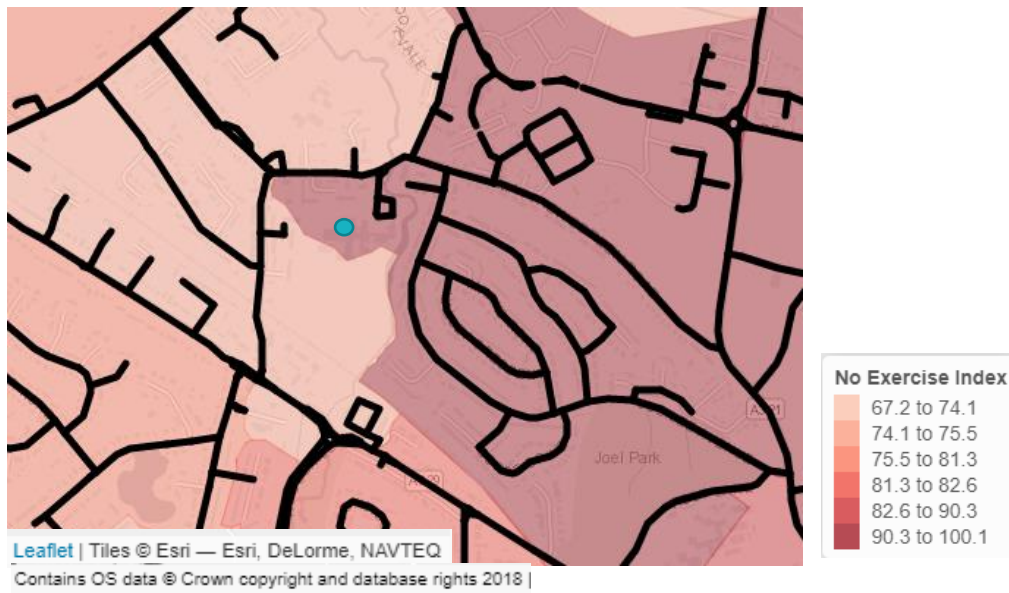


Figure 77 shows that drivers travelling to Emmbrook Secondary are unlikely to encounter significant congestion on the routes leading to the school. The index values indicate there is minimal difference between morning peak average speeds and free-flowing average speeds.

Figure 77 - Emmbrook Snr Congestion Index (AM)



INFRASTRUCTURE RATING

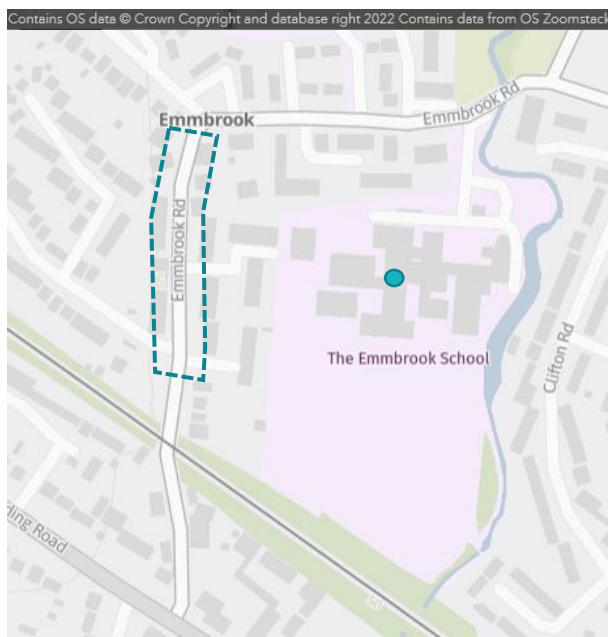
Having examined the infrastructure fronting Emmbrook Infants & Junior and it being the same road fronting Emmbrook Senior, here the infrastructure assessment has been applied to Emmbrook Road south of its junction with Commons Road which is another favoured route for pupils approaching from south-west of the school.

Emmbrook Road

The south section of Emmbrook Road remains within the 20mph zone for the area and as a result the infrastructure rating scores high throughout reflecting the importance of speed in reducing road user risk.

There is no designated crossing point on Emmbrook Road (south), installing an informal crossing point would present pedestrians with moderate traffic stress whereas a raised zebra without a traffic island would present a low level of traffic stress for pedestrians.

Figure 78 - Emmbrook Snr Infrastructure Assessment



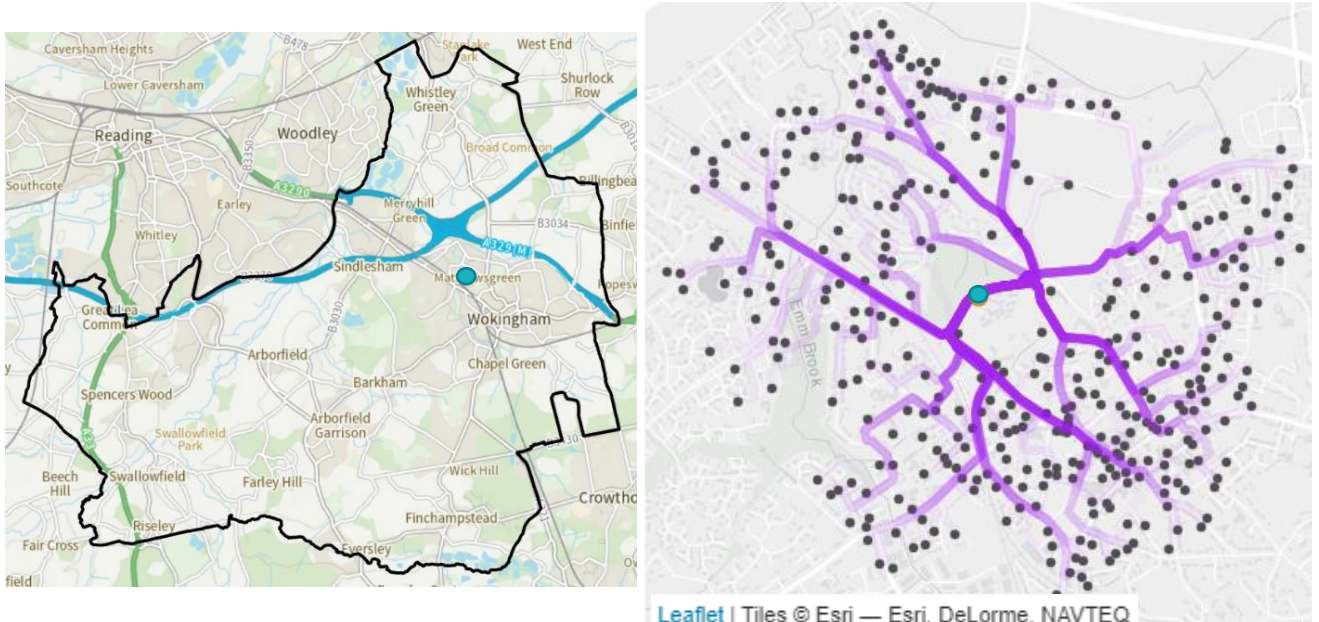
Pedestrian Footway	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
No physical segregation (0-1m)	★★★★★	Moderate stress

Pedestrian Crossing Type	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
Informal	★★★★★	Moderate stress
Traffic island	★★★★★	Low stress
Zebra (Unraised; no traffic island)	★★★★★	Moderate stress
Raised informal crossing without traffic island	★★★★★	Moderate stress
Unraised zebra with traffic island	★★★★★	Low stress
Raised informal crossing with traffic island	★★★★★	Low stress
Raised zebra without traffic island	★★★★★	Low stress
Raised zebra with traffic island	★★★★★	Low stress
Signal controlled (no traffic island)	★★★★★	Low stress
Signal controlled with traffic island	★★★★★	Low stress

HOLT SECONDARY SCHOOL

Holt Secondary School is situated to the northwest of Wokingham town centre and whilst its catchment is Borough wide there is a focus of pupil homes across the town centre and further to the northwest. The location of Holt Secondary is such that all access to the school is via Holt Lane, as identified in the favoured active travel routes shown in Figure 79.

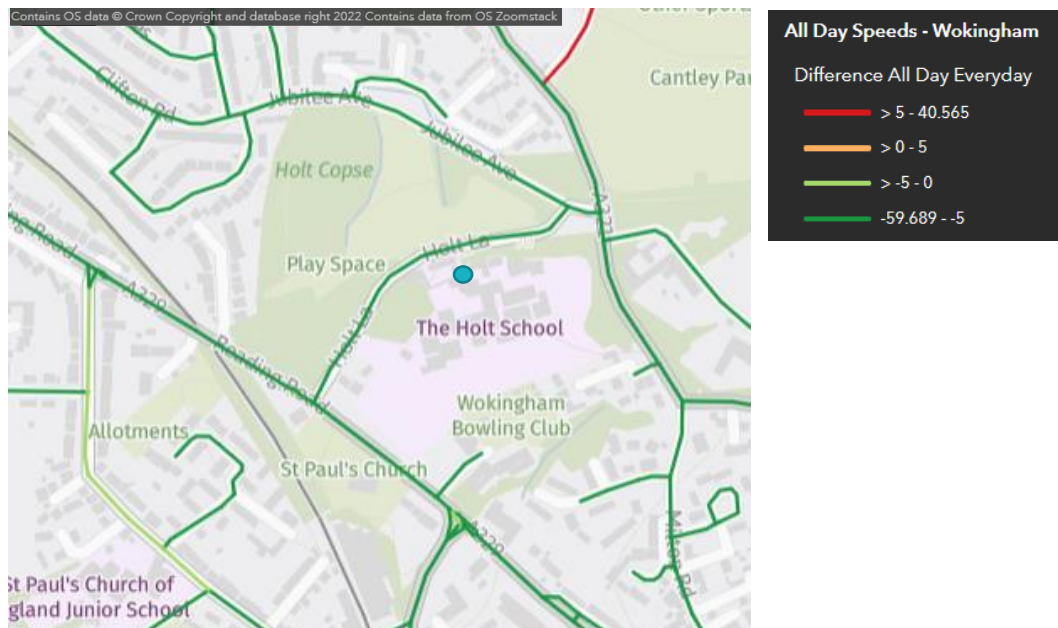
Figure 79 - Holt School location & favoured active travel routes



TRAFFIC SPEED

Traffic speeds on the roads around Holt Secondary, including the favoured active travel routes indicate good compliance with the speed limit as a result of all day average speeds consistently less than the posted speed limit, shown in Figure 80.

Figure 80 - Holt All day average speed compliance



Holt Lane itself is subject to a 20mph zone and focusing on speeds here reveals an all-day average speed of 13mph and an operating speed of 19mph. 10% of vehicles using Holt Lane are estimated to exceed the speed limit.

Figure 81 - Holt speed compliance by road section

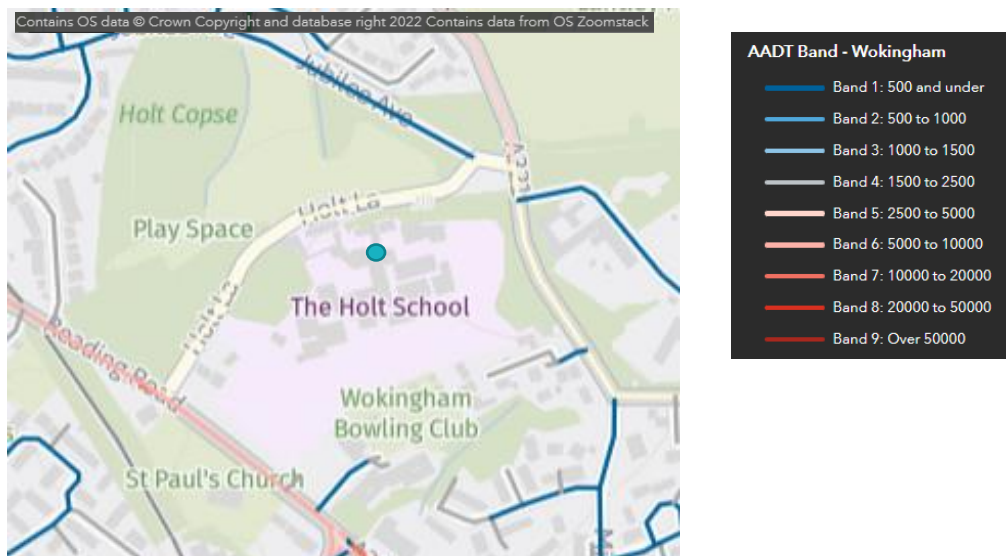


Percent over Limit	Number over Limit
9.7%	174
Percent over ACPO	Number over ACPO
1.9%	34
Percent over 15mph Above	Number over 15mph Above
0.0%	0
All Day Average Speed	All Day 85th Percentile Speed
13.3mph	18.6mph

TRAFFIC VOLUME

Holt Lane provides access to Holt Secondary premises only however with an estimated 1,500 and 2,500 vehicles using Holt Lane each day it may also be used by drivers as a link between the A329 and the A321.

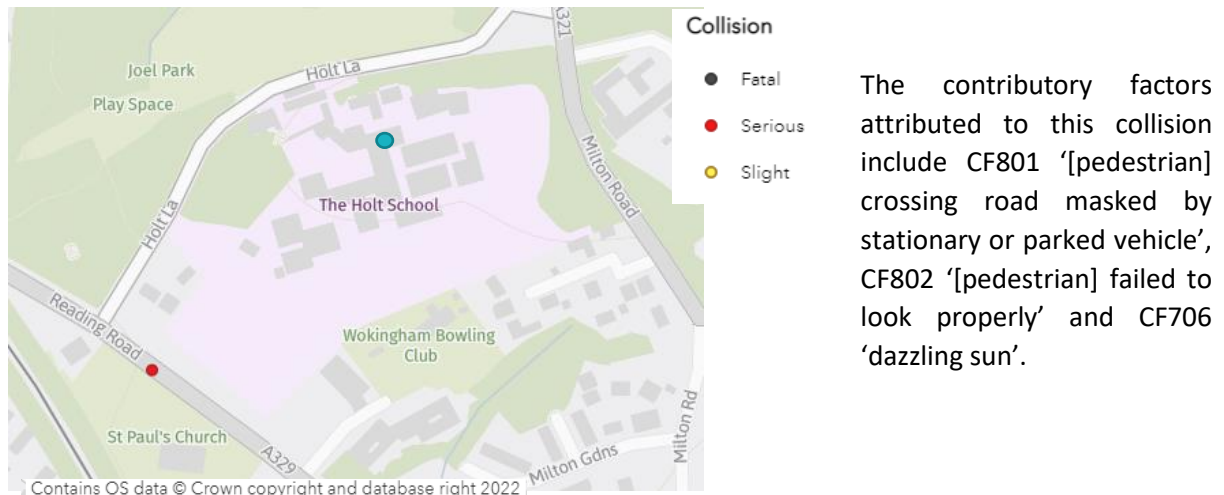
Figure 82 - Holt AADT levels



COLLISION HISTORY

Between 2017 and 2021 there have been no injury collisions involving child pedal cyclists around Holt Secondary but in 2020 there was a serious collision involving an U16 pedestrian casualty on A329, Reading Road. The collision occurred at a date and time consistent with the school journey and occurred at a signal-controlled crossing from which there is pedestrian access to the school site.

Figure 83 - Holt child pedestrian casualty (2017 – 2021)



ADDITIONAL ACTIVE TRAVEL BARRIERS

As seen previously Wokingham Town Middle Super Output Area (MSOA) has typically lower than average bike ownership levels (Figure 84) and higher no exercise index levels (Figure 85). Holt School lies within this geographical area.

Figure 84 - Holt Bike Ownership Index



Figure 85 - Holt Level of Exercise Index



Having noted the potential use of Holt Lane by traffic linking between the A329 and the A321, this is perhaps verified by the morning peak congestion index values shown in Figure 86 where free-flowing speeds, particularly in a south-west direction, are nearly twice as high as average speeds between 7am and 9am.

Figure 86 - Holt Congestion Index (AM)



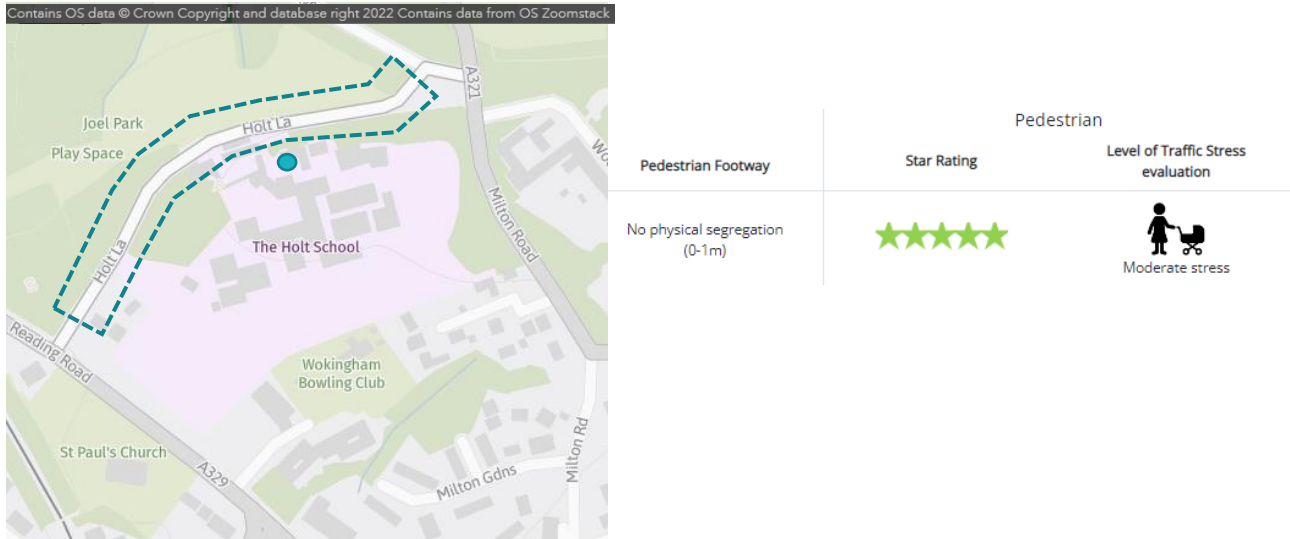
INFRASTRUCTURE RATING

Holt Lane

As a predominant favoured active travel route for pupils attending Holt Secondary, Holt Lane has been assessed using the Active Travel Tool to understand the level of 'built-in' safety for pedestrians and cyclists using this route. However there is only a pedestrian footway on Holt Lane so only this category of active travel can be examined.

As we've seen with other areas of infrastructure the presence of 20mph restrictions, as there is on Holt Lane, plays a significant influence on the star rating of routes. Figure 87 confirms this in confirming that Holt Lane is awarded a 5-star rating for pedestrians.

Figure 87 - Holt Infrastructure Assessment Area 1



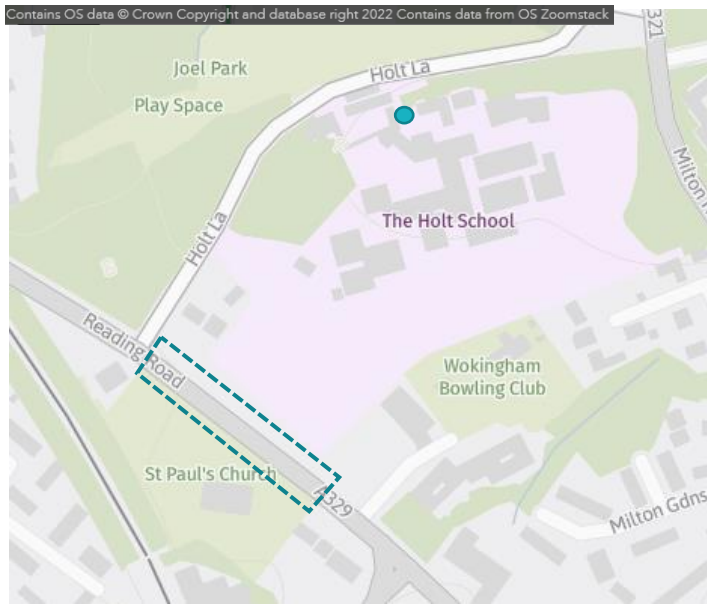
A329, Reading Road

Reading Road has also been subject to an infrastructure assessment given the additional entry point to and from the school on its western boundary and the results of this are shown in Figure 88.

The pedestrian footway on Reading Road is attributed a 4-star rating with a moderate level of traffic stress. On the north-eastern side of the carriageway is a shared foot / cycle way and this facility has been attributed a 5-star rating for both pedestrians and cyclists with again a moderate level of traffic stress.

Finally the pedestrian crossing category can be used to assess the existing signal controlled crossing on Reading Road. The characteristics of this route result in all crossing types being awarded either a 4 or 5-star rating, although the level of traffic stress pedestrians would be exposed to varies; uncontrolled crossings involve a high level of traffic stress. A raised zebra crossing with traffic island or signal controlled crossing with island (as present) offers the highest star rating and lowest level of traffic stress for pedestrians.

Figure 88 - Holt Infrastructure Assessment Area 2



Pedestrian Crossing Type	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
Informal	★★★★★	High stress
Traffic island	★★★★★	High stress
Zebra (Unraised; no traffic island)	★★★★★	Moderate stress
Raised informal crossing without traffic island	★★★★★	High stress
Unraised zebra with traffic island	★★★★★	Moderate stress
Raised informal crossing with traffic island	★★★★★	High stress
Raised zebra without traffic island	★★★★★	Moderate stress
Raised zebra with traffic island	★★★★★	Low stress
Signal controlled (no traffic island)	★★★★★	Moderate stress
Signal controlled with traffic island	★★★★★	Low stress

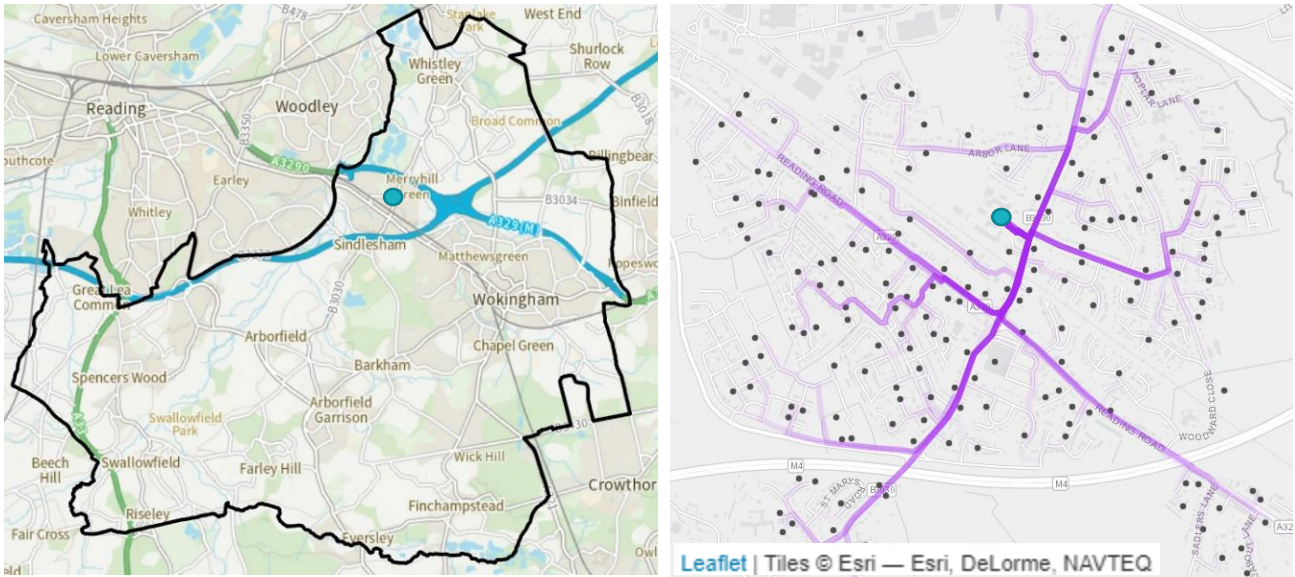
Pedestrian Footway	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
No physical segregation (0-1m)	★★★★★	Moderate stress

Footway and cycleway	Pedestrian		Bicycle	
	Star Rating	Level of Traffic Stress evaluation	Star Rating	Level of Traffic Stress evaluation
Light segregation from motorised traffic (off-road footway/cycleway)	★★★★★	Moderate stress	★★★★★	Moderate stress

FOREST SECONDARY SCHOOL

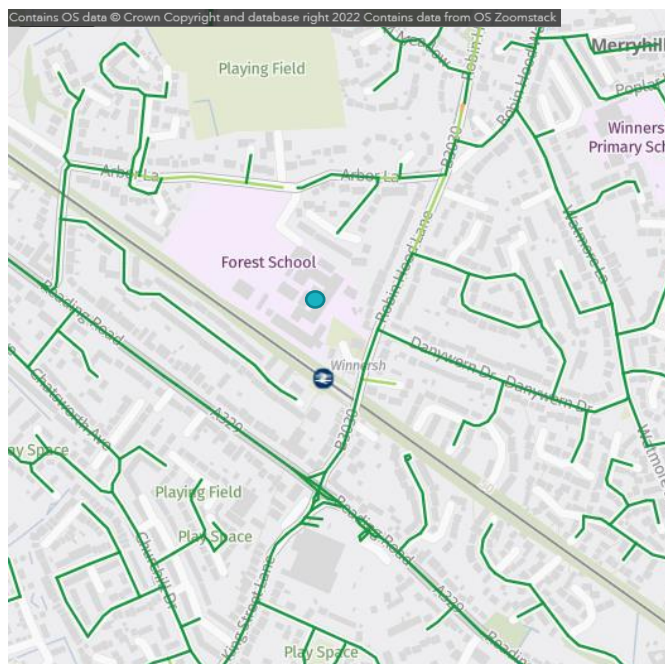
The last secondary school to be examined as part of this report is Forest School in Winnersh. Whilst the catchment area is the same as the other secondary schools the number and distribution of pupil home postcodes suggests pupil numbers are fewer here than some other secondary schools. The favoured active travel routes shown in Figure 89 focus on Robin Hood Lane from which the school is accessed.

Figure 89 - Forest school location & favoured active travel routes



TRAFFIC SPEED

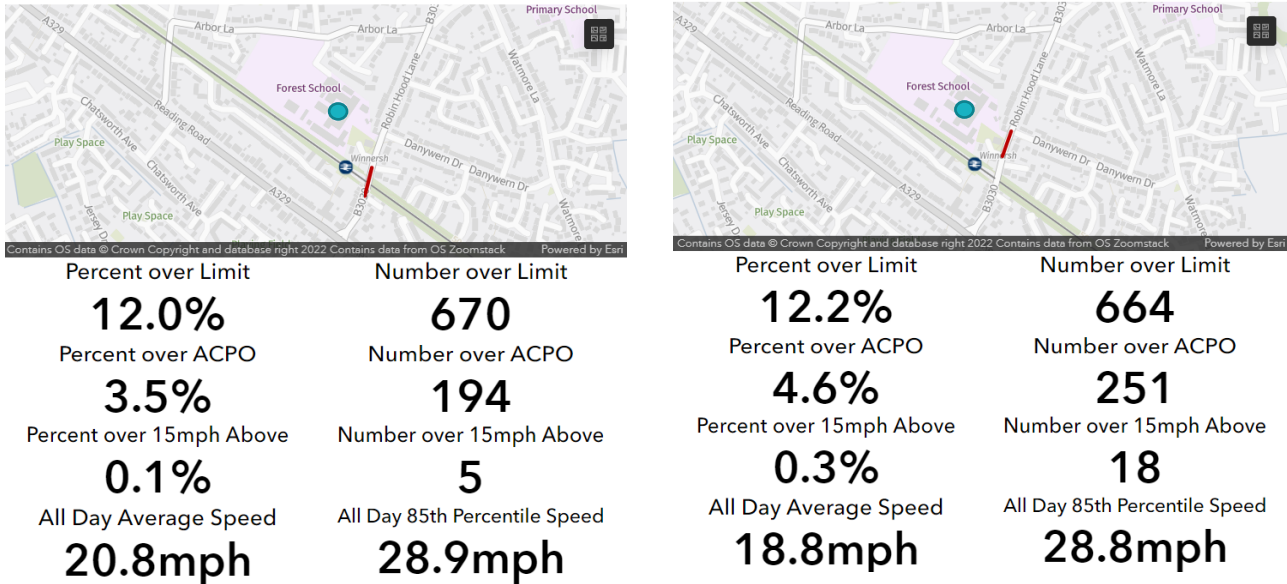
Figure 90 - Forest All day average speed compliance



Data from the Speed Compliance Tool (SCT) for the period April 2021 – March 2022 shows that compliance with the speed limits around Forest School is good. The difference between all day average speeds and the posted speed limits falls below zero on all routes shown in Figure 90 indicating all day average speed are slower than the local limits of 30mph and 40mph.

Figure 91 verifies this revealing that all day average speeds on Robin Hood Lane are 21mph just south of the school entrance and 19mph just north. 12% of the traffic using Robin Hood Lane is estimated to be exceeding the speed limit of 30mph.

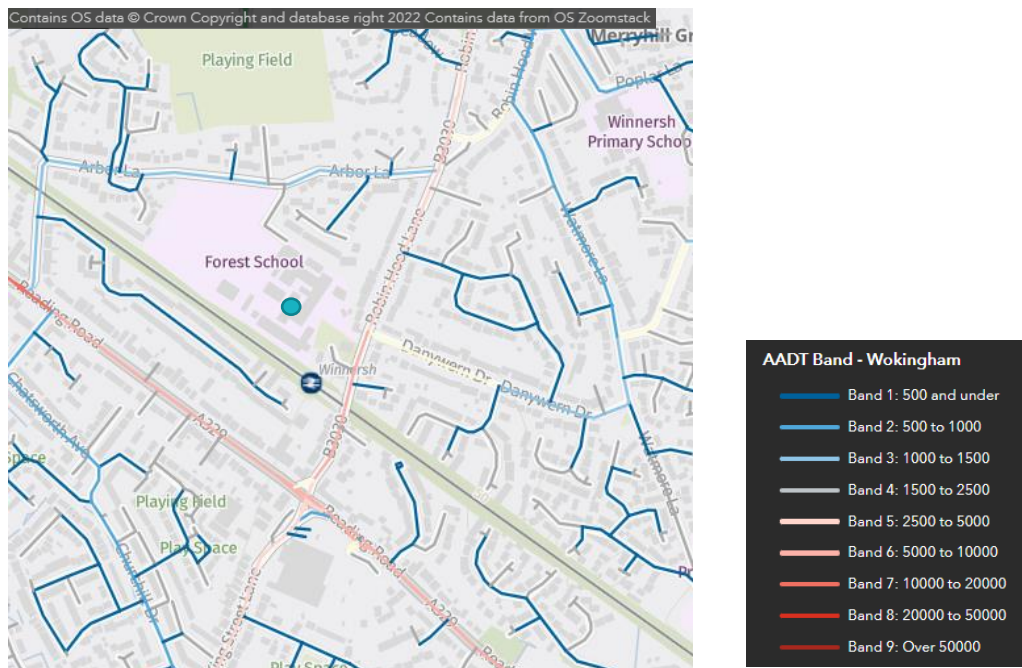
Figure 91 - Forest speed compliance by road section



TRAFFIC VOLUME

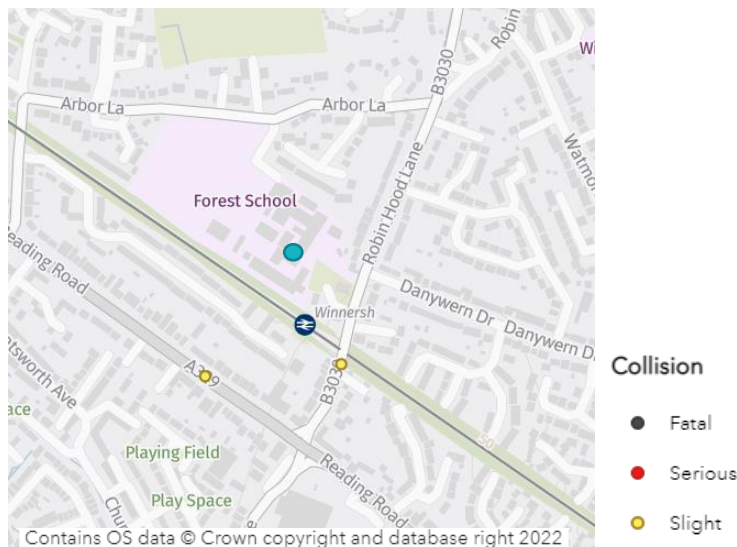
Traffic volumes on Robin Hood Lane are estimated to be between 5,000 to 10,000 vehicles per day. Other residential streets around the school are estimated to carry significantly fewer vehicles with annual average daily traffic (AADT) volumes of 1,500 vehicles or less. Students walking or cycling to school from the south west and travelling along Reading Road will encounter higher traffic volumes of 10,000 to 20,000 vehicles per day.

Figure 92 - Forest AADT Levels



COLLISION HISTORY

Figure 93 - Forest Child Pedestrian casualties



There are reports of two collisions involving pedestrians under the age of 16 that have occurred at the locations shown in Figure 93, in the vicinity of Forest School. The date and time of each collision indicates they could have occurred during a school journey, and they involved children of secondary age. Only the collision on Reading Road was attributed with contributory factors – CF802 ‘[pedestrian] failed to look properly’ and CF808 ‘[pedestrian] careless, reckless or in a hurry’.

Figure 94 - Forest Child Pedal Cyclist casualties (2017 - 2021)

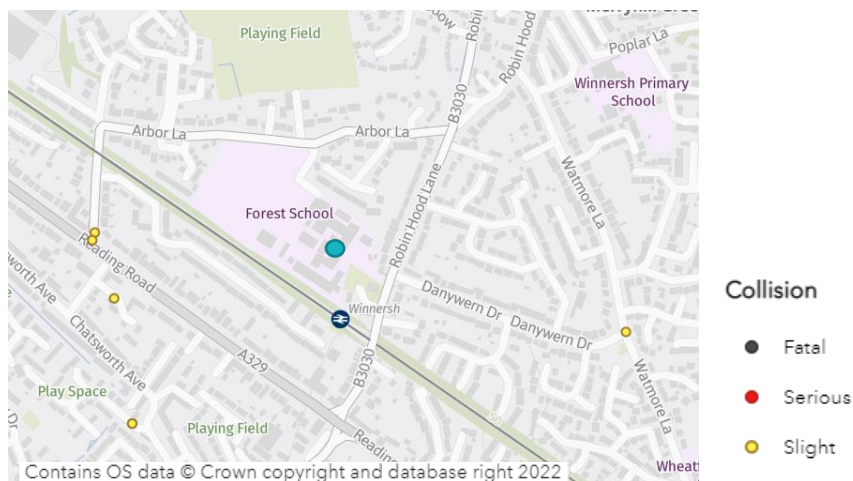


Figure 94 shows that there have been more collisions involving child pedal cyclists on the roads around Forest School, however only 3 of the 5 collisions shown are likely to have occurred during a school related journey for pupils of secondary age.

The 2 collisions at the junction of Reading Road and Arbor Lane involved a pedal cyclist crossing the road and colliding with a car. Just one collision was attributed the contributory factor CF405 ‘failed to look properly’ although it is not clear whether this applied to the pedal cyclist or vehicle driver. The third collision on Wainmore Lane was not attributed any contributory factors and the pupil was of transition age from primary to secondary so it’s not clear whether they might have been travelling to Forest School or another, such as Wheatfield Primary.

ADDITIONAL ACTIVE TRAVEL BARRIERS

As we’ve explored previously in this report there is a strong, inverse relationship between having access to a bike and likelihood of engaging in exercise, including active travel modes. Residents living to the north-east of Forest School have higher bike ownership levels than the national norm while residents to the south-west have around average bike ownership levels. Given the relationship with propensity to exercise, the no exercise index bands shown in Figure 96 are the reverse of the bike ownership levels.

Figure 95 - Forest Bike Ownership Index

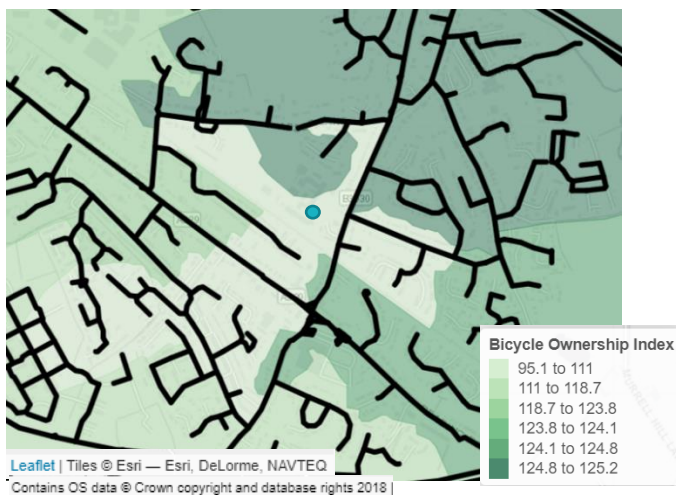


Figure 96 - Forest Level of Exercise Index



As another potential barrier to active travel, the level of congestion around school during the morning peak travel hours of 7am to 9am has been examined. In Figure 97 the congestion levels are shown as an index to free-flowing average speeds and reveals there is not heavy congestion in the area. Average speeds during the morning peak are around 20% slower than night-time average speeds when traffic is most likely to be free-flowing.

Figure 97 - Forest Congestion Index (AM)



INFRASTRUCTURE RATING

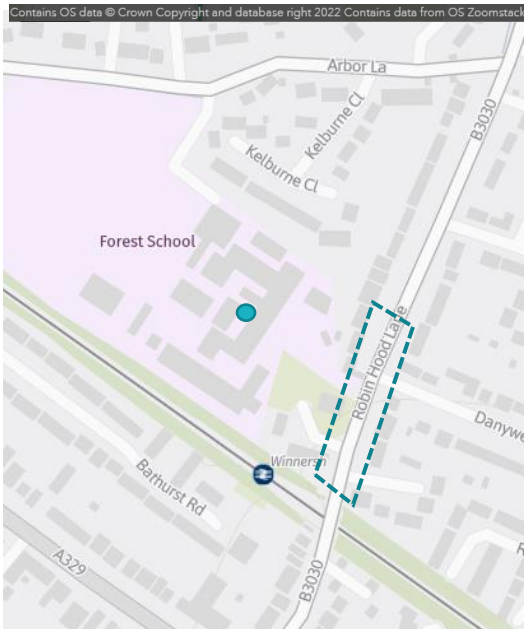
Robin Hood Lane

As the main access point to Forest School, the infrastructure of Robin Hood Lane has been assessed using the Active Travel Tool. The level of 'in-built safety' is considered to achieve a 4-star rating for the pedestrian footway category of active travel, with pedestrians subject to a moderate level of traffic stress that most adults can tolerate.

There is an existing signal-controlled crossing on Robin Hood Lane just north of the school entrance and assessment of this facility through the tool indicates it offers pedestrians a 5-star level of safety

with moderate stress. Only informal crossing points with and without a central island achieve a lower rating of 4-stars. The presence of speed management – fixed speed enforcement camera - and parking controls on both sides of the road are significant factors contributing to the results shown in Figure 98.

Figure 98 - Forest Infrastructure Assessment



Pedestrian Crossing Type	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
Informal	★★★★☆	High stress
Traffic island	★★★★☆	High stress
Zebra (Unraised; no traffic island)	★★★★★	Moderate stress
Raised informal crossing without traffic island	★★★★★	High stress
Unraised zebra with traffic island	★★★★★	Moderate stress
Raised informal crossing with traffic island	★★★★★	High stress
Raised zebra without traffic island	★★★★★	Moderate stress
Raised zebra with traffic island	★★★★★	Low stress
Signal controlled (no traffic island)	★★★★★	Moderate stress
Signal controlled with traffic island	★★★★★	Low stress

Pedestrian Footway	Pedestrian	
	Star Rating	Level of Traffic Stress evaluation
No physical segregation (0-1m)	★★★★☆	Moderate stress

CONCLUSION

This report sought to give insight into the degree to which identified parental barriers to independent travel exist in Wokingham and specifically in the vicinity of six primary and 4 secondary schools across the Borough. Considering each of the identified transport-related barriers, we can make some conclusions on the extent to which the evidence verifies them as challenges to active travel.

All day average speed data from the Speed Compliance Tool indicates that vehicles travelling on roads surrounding schools are doing so at speeds compliant with the posted speed limit and in many cases, more than 10mph less than the speed limit. Schools situated in areas of existing 20mph speed limits or accessed from roads carrying higher traffic volumes are those where all day average speeds are closer to the speed limit.

Traffic volume on the network around schools varies depending on their location. Many schools are sited in residential areas where traffic volumes are estimated to be very low, with AADT less than 1,500 vehicles. A few schools are located close to main A roads on which traffic volumes are significantly higher and that, depending on pupil's home locations, they may have to cross to get to and from school.

The third identified parental barrier to independent travel was risk of collision involvement, however few injury collisions involving child casualties have been reported near schools. Only 26 child pedestrian or pedal cyclist casualties have been reported over the 5-year analysis period in the vicinity of the ten schools studied. Of these, based on the information available, just 13 are suspected to have occurred on a journey to or from school.

The Active Travel tool assessments have identified that Wokingham's infrastructure at these ten schools generally offers a good level of in-built safety for road users with most sites assessed as 4-star or higher. Those sites within 20mph limits or with speed management measures present achieve the highest star ratings reinforcing the importance of speed in reducing road user risk. The star ratings awarded to existing signal-controlled crossings may be used to help inform pedestrian facility provision at other sites where designated crossing points may be absent.



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