

Eccleshall Parish Council Speed Indicator Devices

Review and analysis, April, 2023 prepared by Cllr Ant Reid

The council has five Speed Indicator Devices, four of which move around the parish to eight locations for a period of one month each, and one (new) SID is permanently located on the Newport Road.

Data is collected from vehicles approaching the SID (and thus seeing their speed) as well as those traveling in the other direction (away from the SID, and thus cannot see their speed). No identifiable data is collected – just the speed, direction of travel, and time/date.

This analysis focuses on the average speed at each location, and uses the following two terms as key measures –

- Compliance: the proportion of vehicles are traveling at or below the speed limit
- Excessive: the proportion of drivers who exceed the speed limit by at least 10 MPH

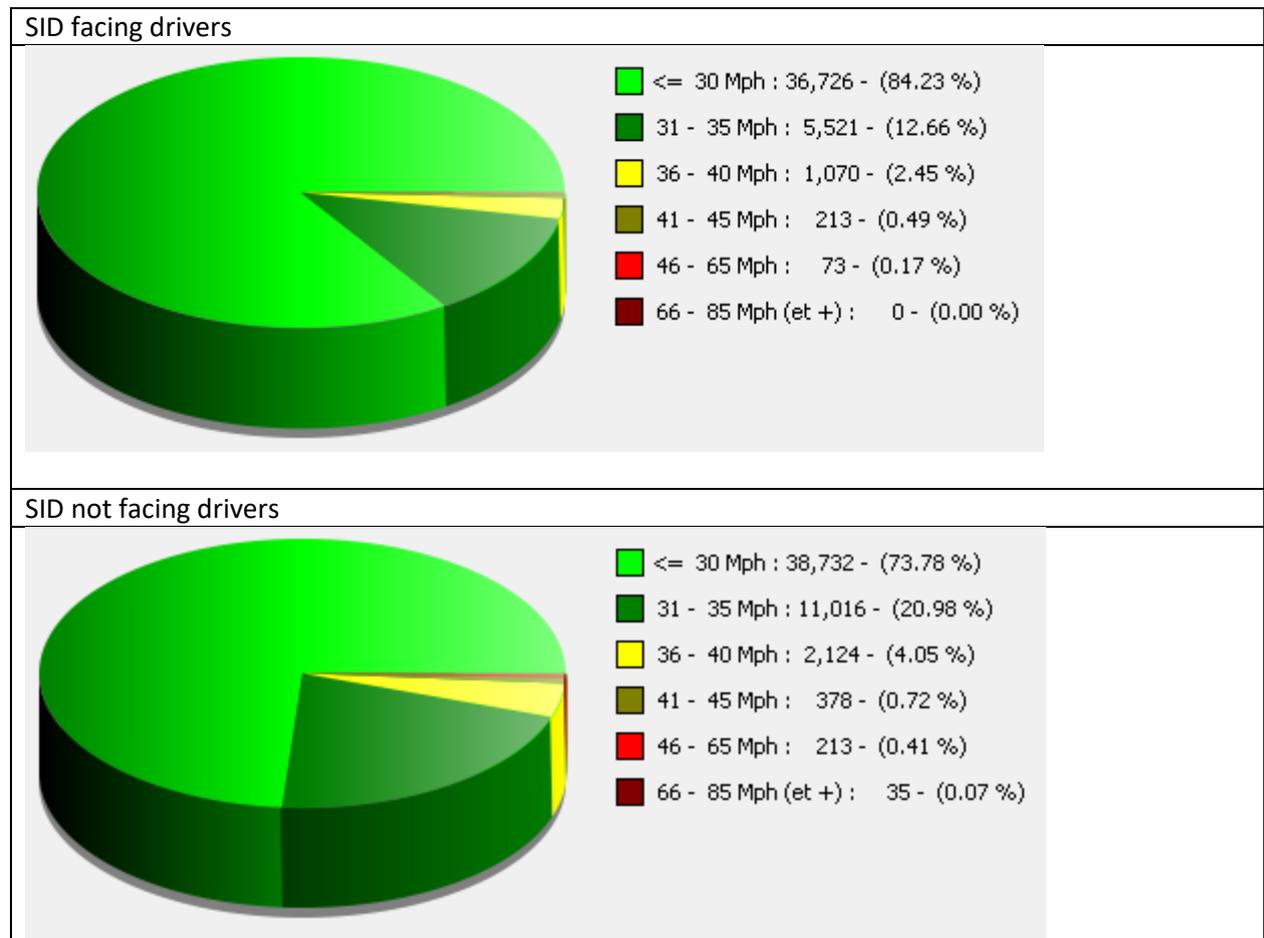
The data in this report covers various periods up to March 30, 2023.

Summary of conclusions:

1. In all locations 'compliance' is relatively good, with more than half (and sometimes as much as 90%) of vehicles obeying the speed limit.
2. Most locations have good 'compliance' when the SID is facing traffic, showing a measurable improvement when compared to the SID not facing the same traffic.
3. One location shows negligible improvement, yet has very high compliance anyway. This is not an effective location/direction for the SID.
4. In Croxton compliance is low in one direction and the SID is not having a measurable impact on drivers. It is likely that there is an issue with the siting of the SID. The Traffic Management committee have recommended certain actions be explored to resolve this, and future SID data be used to measure the effectiveness of the action.
5. In two locations there is ambiguous data, and a change in how we measure the speed there may clear up the data.

Stone Road: Vehicles leaving town

Two graphs showing vehicle speeds when driving east, towards Stone:



Analysis

This shows that having the SID improves compliance by over 10%, and decreases excessive speed slightly.

The SID is having a measurable impact on compliance

Stone Road: Vehicles entering town

Two graphs showing vehicle speeds when driving west, towards Eccleshall:



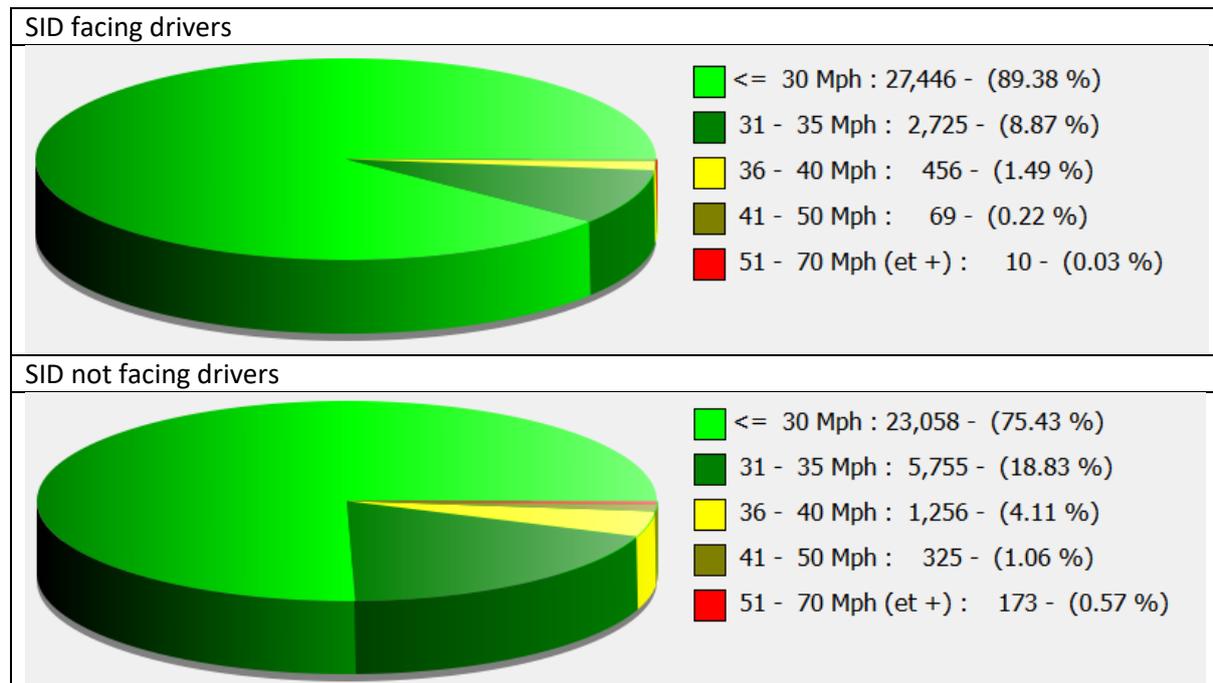
Analysis

This shows negligible impact – the compliance is already high and does not change much when the SID is facing the driver.

The SID is having a negligible impact on drivers' speeds.

Croxton: vehicles heading east

Two graphs showing vehicle speeds when driving east, towards Eccleshall:



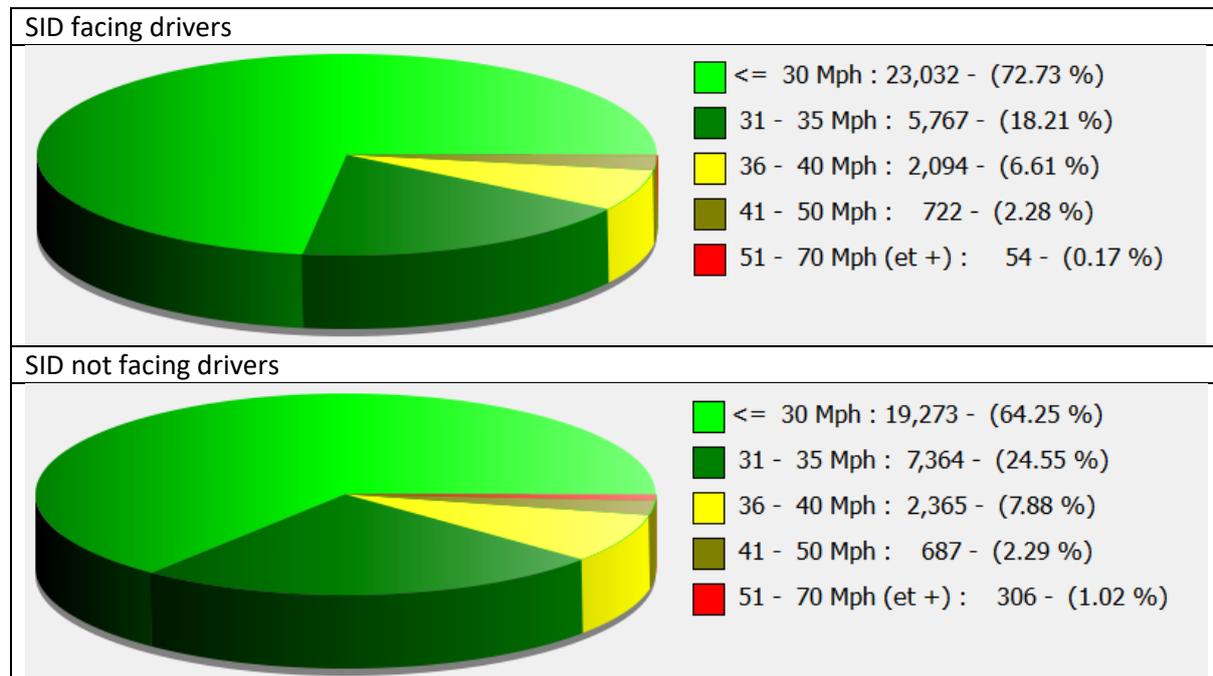
Analysis

This shows that having the SID improves compliance by over 14%, and decreases excessive speed significantly (by several hundred vehicles per month).

The SID is having a measurable impact on compliance

Croxton: vehicles heading west

Two graphs showing vehicle speeds when driving west, towards Loggerheads:



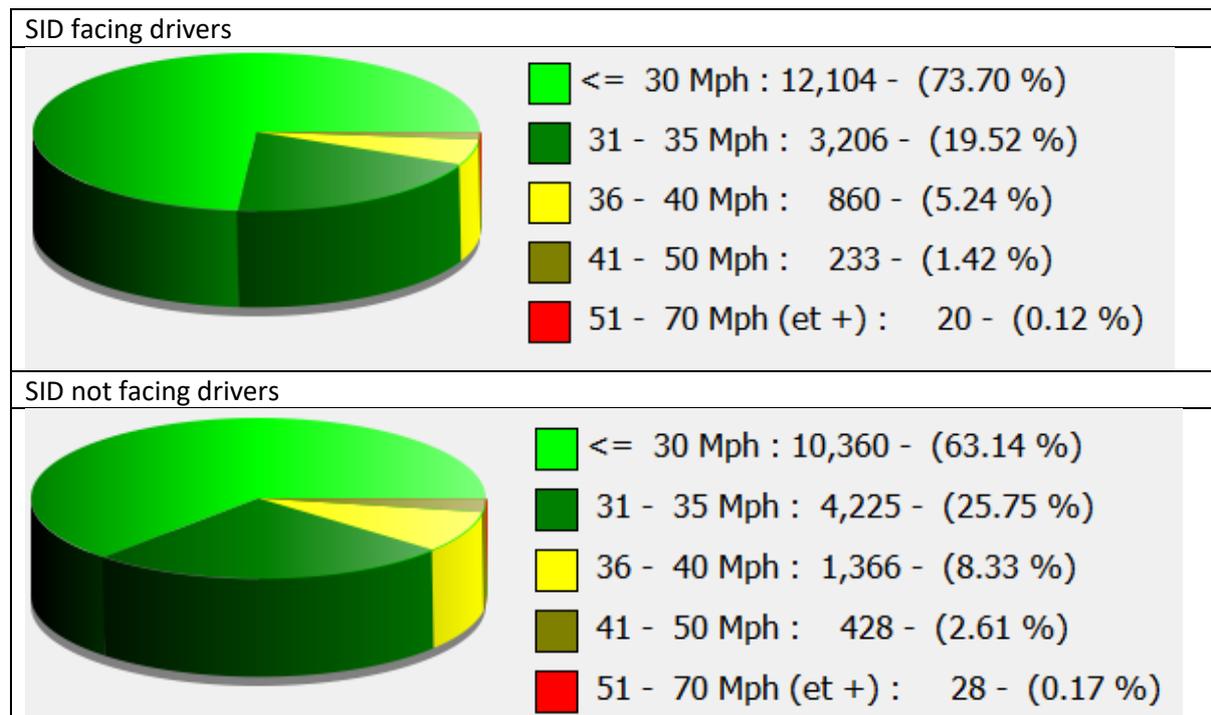
Analysis

This shows that having the SID improves compliance by about 6%, and decreases excessive speed somewhat). However, overall compliance is still relatively low at 72% and excessive speeding is relatively high at over 2%. This data is broadly consistent across other months at different times of the year.

The SID is having a small impact on compliance

Green Lane: Vehicles heading East

Two graphs showing vehicle speeds when driving east, towards the Stafford Road:



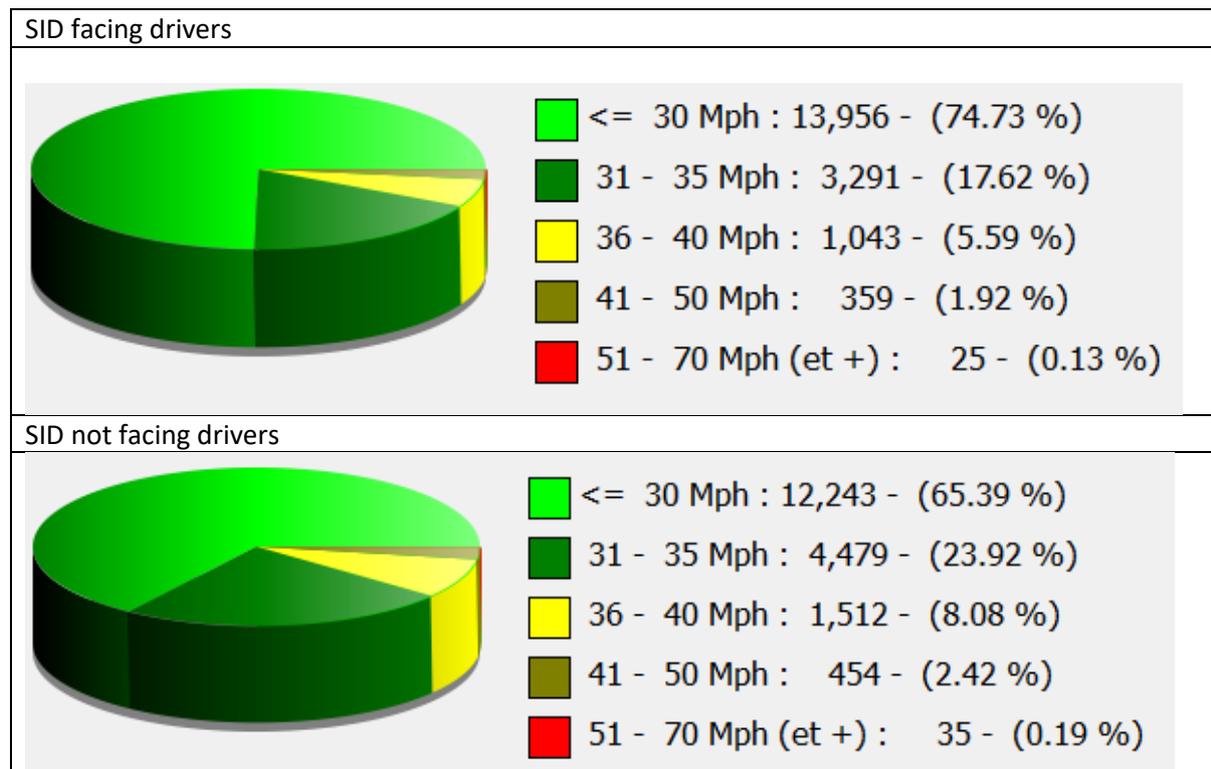
Analysis

This shows that having the SID improves compliance by over 10%, and decreases excessive speed by over 1%. However, compliance is still only approximately 74% and still several hundred vehicles a month travel excessively fast along this road.

The SID is having a measurable impact on speed compliance.

Green Lane: Vehicles heading West

Two graphs showing vehicle speeds when driving west, towards the Newport Road:



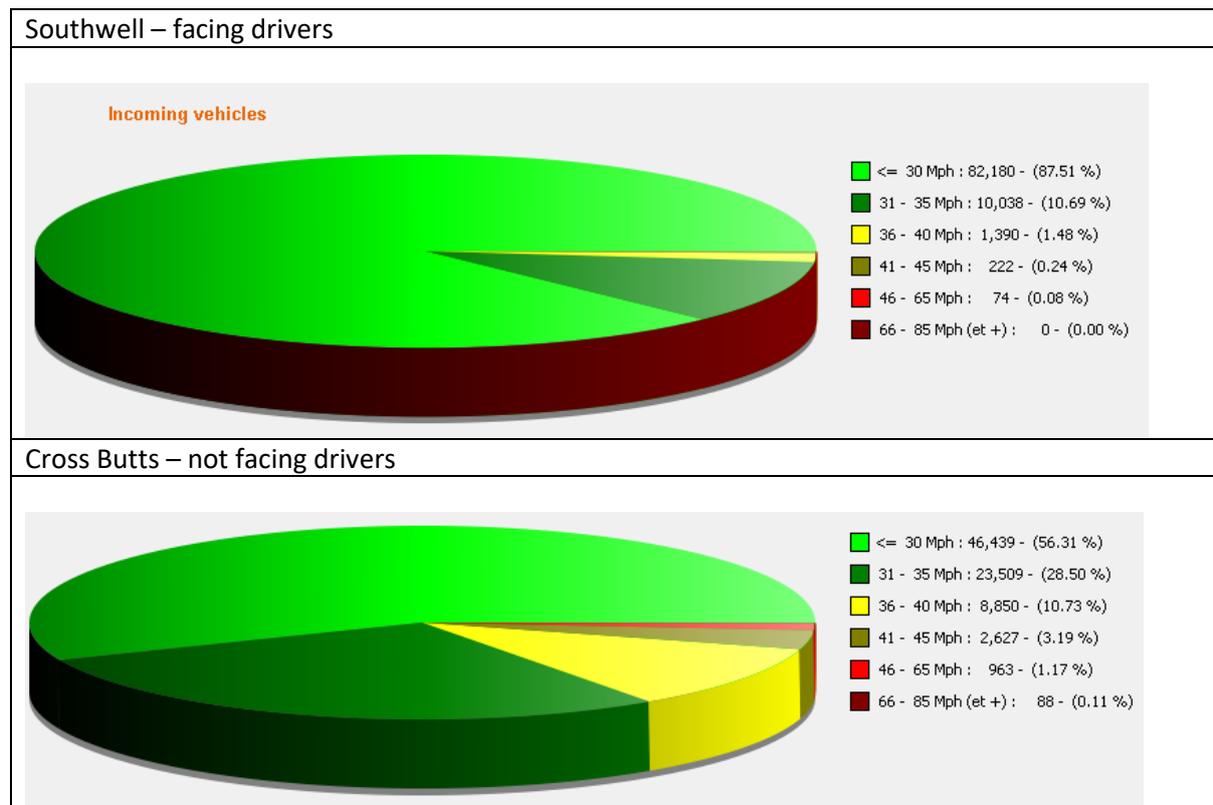
Analysis

This shows that having the SID improves compliance by nearly 10%, and decreases excessive speed slightly. However, compliance is still only approximately 75% and still several hundred vehicles a month travel excessively fast along this road.

The SID is having a measurable impact on speed compliance.

Newport Road – Vehicles leaving town

Two graphs showing speeds of vehicles traveling uphill – measured at the bottom and top of the hill:



Analysis

There is a large drop in compliance between the bottom and top of the hill, with over three thousand vehicles driving excessively (over 40MPH) at the Cross Butts crossroads (over 4%).

It may be useful to rotate this SID to face downhill, and do further analysis on the data to identify patterns to the issue (such as time of day or day of week).

It is worth noting that still over 80% of vehicles travel below 35 MPH when reaching the edge of the town. In absolute terms that is relatively good compliance.

Newport Road – Vehicles entering town

Two graphs showing speeds of vehicles traveling downhill – measured at the top and bottom of the hill:



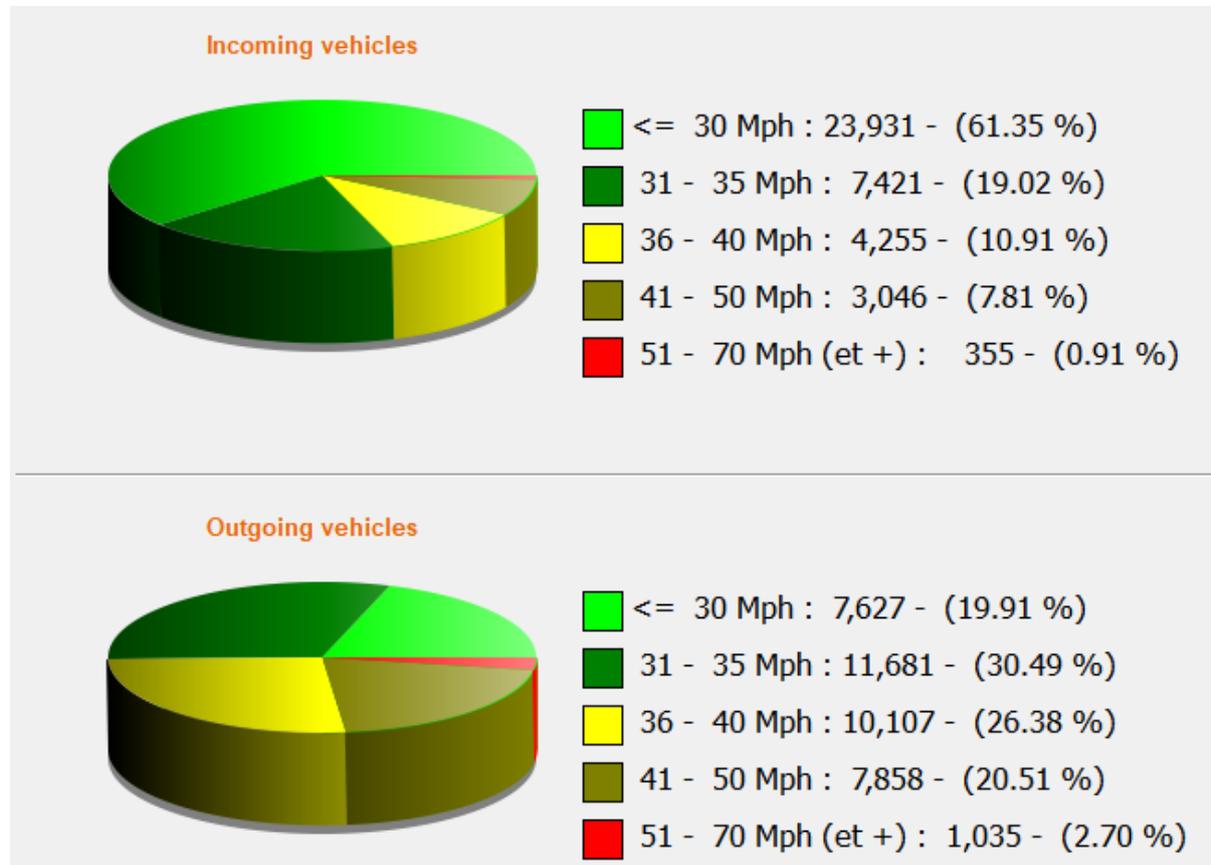
Analysis

Very good compliance at both top and bottom of the hill. Data is only collected from the top of the hill when the SID is facing downhill drivers, so it is not possible to determine the impact of the SID (we never measure speed when the SID is not facing drivers). Rotating the SID for a month may enable better analysis of this.

Chester Road

This has a different layout as the data is more limited.

The SID always faces eastbound vehicles entering Eccleshall (*incoming*), and also measures the speed of *outgoing* vehicles leaving the town westwards (who cannot see the SID).



Analysis

Very low compliance when leaving the town. Given the location, within site of the end of the 30 MPH zone, this is not unexpected but is nevertheless very low.

Relatively low compliance (61%) when entering town, but over 80% traveling below 35 MPH. Over 8% of vehicles – more than 3,000 – are traveling at excessive speeds (over 40 MPH) at a point several hundred metres within the speed limit zone and passing the tennis and cricket grounds entrances.

It might be useful to investigate ways to further increase compliance for eastbound traffic (*incoming* vehicles), as that is the side of the road with the pavement.

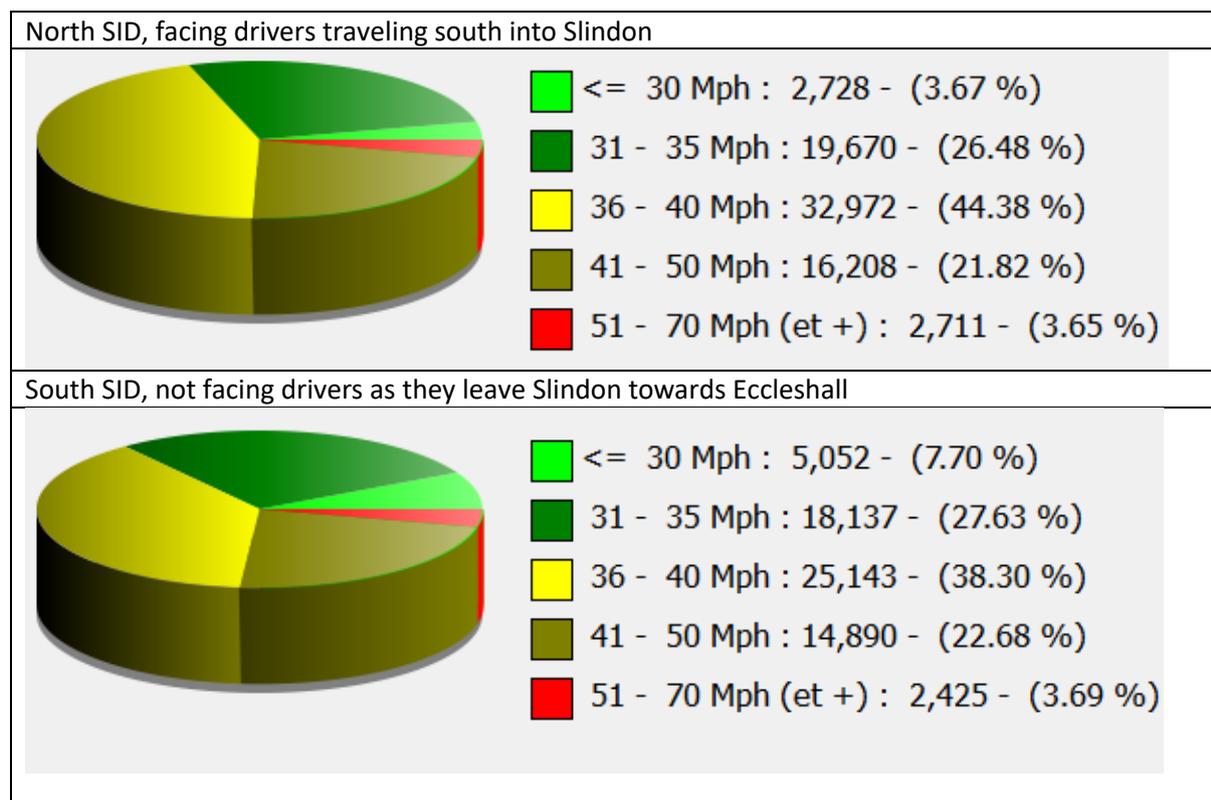
It is not possible to evaluate whether the SID makes a difference, as we do not rotate the SID.

Slindon – vehicles traveling south

Two graphs showing vehicles traveling south (towards Eccleshall). The two SID locations are at either edge of the village, and so the North one is facing drivers as they enter the village while the South one is not facing drivers as they leave the village.

The data was recorded in different months, and so the number of vehicles do not tally.

The speed limit is 40MPH, and so green and yellow are in compliance. 'Excessive' would be over 50 MPH (red)



Analysis

With 25% non-compliance, and nearly 4% excessive speeds, this is the least compliant location we have looked at. However, there is consistency in that vehicles that have reduced their speed at the first SID continue to obey until they leave the village.

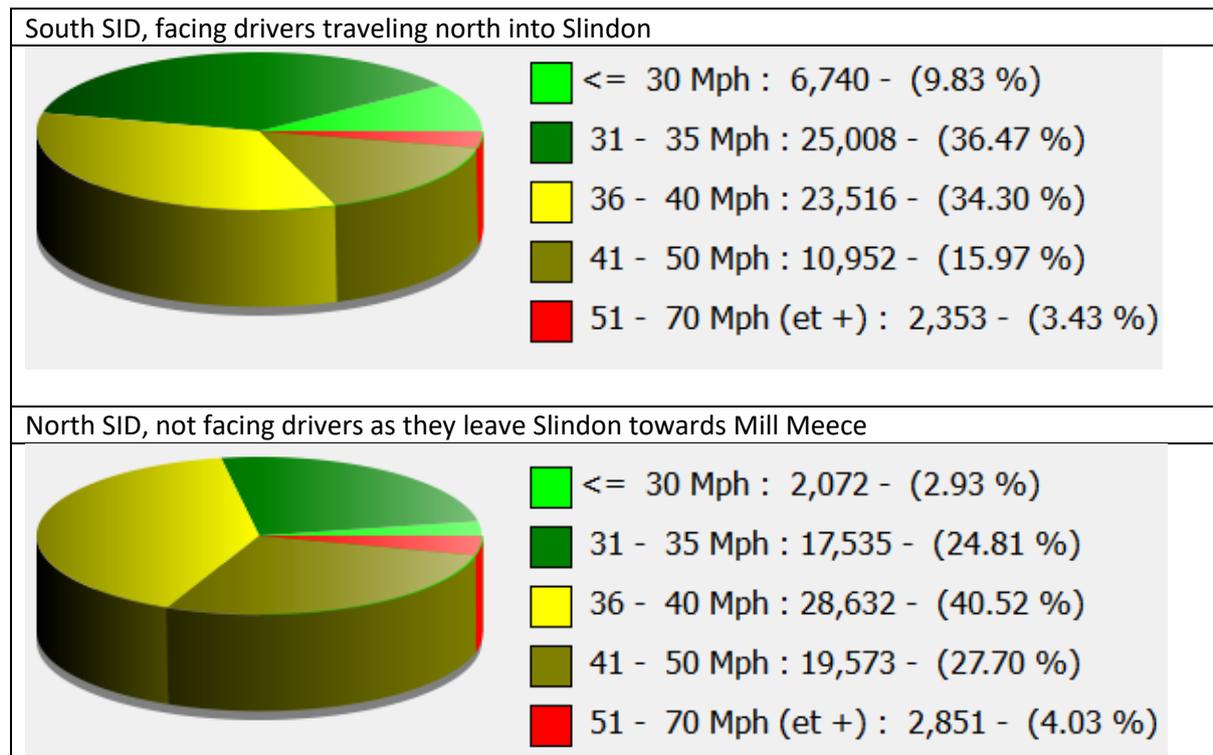
It is not possible to evaluate whether the SIDs make a difference, as we do not rotate the SIDs.

Slindon – vehicles traveling north

Two graphs showing vehicles traveling north (away from Eccleshall). The two SID locations are at either edge of the village, and so the South one is facing drivers as they enter the village while the North one is not facing drivers as they leave the village.

The data was recorded in different months, and so the number of vehicles do not tally.

The speed limit is 40MPH, and so green and yellow are in compliance. 'Excessive' would be over 50 MPH (red)



Analysis

Less consistent results than the southbound data. With less than 2% non-compliance on entering the village but over 30% non-compliance when leaving the village, this shows that vehicle speed up as they approach the SID (which they cannot see as it is facing the other way).

The 3-4% excessive speeds is consistent with the southbound data

It is not possible to evaluate whether the SIDs make a difference, as we do not rotate the SIDs.