



B1281 CASTLE EDEN
(FROM COMMENCEMENT OF 40MPH SPEED LIMIT TO EAST TO C22 T-JUNCTION TO WEST)
(WITHIN 40MPH SPEED LIMIT)

TRAFFIC MANAGEMENT REVIEW

1.0 BACKGROUND

Concerns have been expressed for some time by the local residents of Castle Eden regarding their safety due to the speed of vehicles travelling on the B1281 road through Castle Eden from the commencement of the 40mph speed limit to the east to the C22 T-junction to the west, within the 40mph speed limit at all times of day.

These concerns have again recently been brought to the notice of the local Neighbourhood Policing Team by residents in the vicinity of the School House and this is a PACT priority, which needs to be considered further.

It is viewed that no one agency can resolve this alone and that all those with a direct interest in the area (including residents) need to work together to see if a longer term solution to the local concerns can be found.

2.0 INTRODUCTION TO THIS REPORT

In consequence of the concerns raised by local residents the injury accident record for the B1281 road through Castle Eden from the commencement of the 40mph speed limit at the east to and including the C22 T junction at the west, has been considered from 1st January, 2010 to 27th January, 2014, (three full years plus the existing year being considered the norm for accident research).

7 day 24hour speed survey data has also been considered to assist in better understanding the extent of the speed issue which is not influenced by a uniform Police presence.

In addition the existing Road Markings, Signs and other Infrastructure within the 40mph speed limit area have been considered.

The following text makes comment on existing measures in place and where appropriate makes recommendations for further consideration and actions.

3.0 ACCIDENT RECORD

As indicated the recorded accident record for the B1281 road through Castle Eden from the commencement of the 40mph speed limit to the east to and including the C22 junction at the west has been considered from 1st January, 2010 to 27th January, 2014.

During this time the Police Accident records show that there has been only two injury accidents recorded (both slight Injury). In brief:

Saturday 4th June, 2011 @1216hours – Slight Injury

B1281 at the C22 T- junction

Vehicle 1 (Car) travelling west on B1281 has turned right from the junction to travel north west and collided with Vehicle 2 (Car) travelling south east on B1281.

At the time of the accident it was daylight, the weather was fine and the road surface was dry. Driver failure to look properly and failed to judge other persons path or speed were cited as the main causation factors.

Thursday 15th August, 2013 @1855hours – Slight Injury

B1281 vicinity Hallow Hill

Vehicle 1 (Car) travelling west on B1281 swerved to avoid an animal which ran across the road. The driver lost control, left the carriageway to it's offside, collided with a metal fence and rolled several times.

At the time of the accident it was daylight, the weather was raining and the road surface was wet/damp. Driver swerving, travelling too fast for conditions and animal in carriageway were cited as the main causation factors.

While we do not wish for any accidents to occur at all, the recorded accident record at this location does not show a significant accident problem. It is suggested that no changes to the road layout or police enforcement would have had an influence on the two accidents recorded which was ultimately down to driver error and animal in the carriageway.

4.0 VEHICLE SPEEDS

As indicated to assist in gauging the scale of the speed problem which is not influenced by a uniform presence and to shape the decision making process with regard to any actions that can be taken, 7 day 24 hour speed surveys have been undertaken by the County Council in the vicinity of the School House and near to the Village.

Speed Survey 1:

Location:	Vicinity School House
Date:	Feb 2012
Average Daily Traffic Flow:	3956
Average Speed of vehicles:	41mph
%age within the 40mph speed limit:	51%
%age within the Police Enforcement Threshold:	19%
Main Problem Direction:	Westbound

NOT PROTECTIVELY MARKED

Main Problem Times: M-F 6am to 8pm
Sat 7am to 8pm/ Sun 7am to 7pm

Speed Survey 2:

Location: Vicinity The Village
Date: Feb 2012
Average Daily Traffic Flow: 3949
Average Speed of vehicles: 41mph
%age within the 40mph speed limit: 49%
%age within the Police Enforcement Threshold: 21%
Main Problem Direction: Westbound
Main Problem Times: M-F 6am to 7pm
Sat 7am to 9pm/ Sun 8am to 6pm

In summary the surveys have shown:

- That there is an excess speed problem at the eastern end of the route primarily with vehicles entering Castle Eden.
- A further period of speed enforcement intervention is required by the Police.

5.0 SPEED LIMIT

The speed limit for this section of B1281 road has been considered. In terms of setting speed limits the environment is such that it does not give the impression of a 40mph speed limit road. The rural nature of the road with only 5 properties along the length that could be classed as frontage development and many areas of open aspect conspires to give the impression that the road is subject of a derestricted speed limit. A good accident record and the average speed profiles all conspire to lead to the fact that a higher speed limit should be considered and hence it is acknowledged that due to the characteristics of the route, the lack of credibility of the 40mph leads to poor compliance.

The above said it is appreciated that the accesses to some properties are difficult, the access from The Village onto the B1281 has limited visibility concerns, the route has narrow or no footpaths and pedestrians have to cross at various points on the route, not least to gain access to the local bus service.

While setting speed limits which are credible leads to better speed limit compliance by drivers and a higher speed limit fits within speed limit setting guidance, the concerns of local residents are acknowledged and our recommendation is that while the speed limit lacks some credibility the road as it is should be maintained with the current 40mph speed limit. Relocating the commencement of the 40mph speed limit further east of the village has been considered but will lessen the credibility and is not supported.

6.0 ROAD MARKINGS

The road markings along the length of the B1281 road between the commencement of the speed limit and the C22 junction have been considered in detail.

- The centre road line which is a hazard marking line along its length is the most appropriate for this 40mph speed limit due to the alignment of the road.
- Travelling westbound there are two slow markings on the downward approach to the commencement of the 40mph speed limit.
- At the commencement of the 40mph speed limit a 40mph roundel is painted on the road surface – which in part is faded.
- There is also an edge of carriageway marking on the south side of the road to define the roads alignment for westbound vehicle but this is in a poor condition in places.
- This edge of carriageway marking extends to the School House where it then switches to the north side of the road to the junction with Hallow Hill. It is then present on both sides of the road through the bends passed Hedworth Tower where it then goes back to being on the north side of the road only until the bus stop prior to the C22 junction.
- Travelling beyond the first bus stop westbound is a slow marking followed by a 40mph repeater roundel on the left bend.
- In the approach to the first right bend after the School House there is a slow marking followed by a further 40mph speed limit roundel and a further slow marking.
- Just beyond this on the immediate approach to the right bend a keep left arrow is placed, immediately proceeded by a taper for a length of centre cross hatching which extends through the right and left bend with the cross hatching finishing on the straight just after the left bend.
- Prior to the next left bend another slow marking then 40mph repeater roundel is painted on the road surface.
- A further two slow markings exist prior to the bus stop located just short of the T-junction.
- The T-junction itself is governed by give-way markings and an advanced give-way triangle.

NOT PROTECTIVELY MARKED

- Returning along the route eastbound after the first bus stop which is clearly marked, there is a slow marking and 40mph repeater roundel prior to the keep left arrow and then further slow marking where the taper for the eastbound central cross hatching road markings commence for the double bend.
- The cross hatching continues east through the double bends and where it ceases it is followed by a further slow marking and additional 40mph speed limit roundel on the approach to the School House area.
- Beyond the bus stop near the School House for eastbound vehicles there is yet another slow marking followed by another 40mph roundel and two slow markings on the approach to The Village.
- Beyond the bus stop marking just west of the village junction within the 40mph restricted areas there are no further road markings.
- In summary there are a lot of road markings implemented over a relatively short section of B1281 road which is bordering on too much information for a driver to process. Given this no further road markings through the reviewed area are considered appropriate.
- This said, there is scope to consider the introduction of road markings on the westbound approach to the speed limit signs to further highlight the commencement of the speed limit.

E.G.

- Consider thermoplastic rumble strips on the downhill approach after the preceding left bend or consider anti-skid red bar markings.
- Consider possible dragons teeth and slow marking on a red patch to emphasise the change in environment and need to slow down.

7.0 ROAD SIGNS

The road signage along the length of the B1281 between the commencement of the speed limit and the C22 junction has also been considered in detail.

- On the westbound approach (north side) there is a triangular junction warning sign (designed to warn of the junction to The Village) which is in clear sight.
- The signing to advise motorists that they are entering a 30mph speed limit is yellow backed. The signs themselves are in good condition and clearly visible.

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- Beyond this on the south side of the road is a village nameplate with a flag type directional sign immediately beyond it and opposite The Village junction advising “St James Church”.
- There is then a bend warning triangle on the south side of the road which is yellow backed just prior to the first right bend after the first village bus stop.
- Black and white hazard marker posts with reflectors are positioned in the south verge on the approach and through the bend to give drivers an extra clue of the alignment of the road and the need to reduce their speed when travelling around the bend although some red reflectors are missing.
- A yellow backed black and white chevron is also located on the apex of the left bend.
- Beyond the School House in the south verge and before the first of a double bend, a yellow backed double bend warning sign is in place.
- This is followed by two black and white chevron boards and a large yellow backed chevron board in the apex of the first right bend of the double bend for westbound drivers. There are also black and white hazard marker posts in the verge.
- On the south side of the apex of the left bend two further back and white chevron boards are in place.
- There are then no further signs until a give-way sign with 100 yards plate prior to the actual lit give-way triangle at the junction. Two direction signs are located opposite the junction indicating Teeside A19 to the left and Durham A181 to the right.
- Travelling eastbound from the junction just before the right bend by Hedworth Tower there are two yellow backed double bend warning triangles.
- On the right hand bend a series of three single black and white chevron signs are mounted on high poles as the road descends at this point as well as turning right.
- Black and white hazard marker posts are located around the apex of the right bend.
- Immediately passed the School House a yellow backed left bend warning triangle is located on the south side. The yellow backed left bend warning triangle normally located on the north side is missing and its pole damaged.
- For the left bend a yellow backed black and white chevron is located on the apex.
- A speed indication device pole is located on the north side of the road to the west of The Village which is shared a triangular junction warning sign after the left bend and just before the junction with The Village

NOT PROTECTIVELY MARKED

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- Along the whole length predominantly where the 40mph speed roundels are painted on the road surface there are a number of 40mph speed limit repeater signs in situ.
- The actual positioning of the 40mph speed limit signs has been considered and they are deemed to be in the most suitable location, i.e. just before the start of the first visible houses on the north side at The Village. Moving the signs further eastwards will mean they will lose even more credibility than the little credibility they have now and potentially lead to even higher vehicles speed as motorists will not perceive the area as a 40mph speed limit restricted area at all. There needs to be a clear reason which the motorist can readily perceive to create a credible and effective 40mph speed limit. Also relocation would place the signs in a hedge/treeline which would likely mask the conspicuity of the signs for much of the year. The current location is at a point where dense hedge/treeline ceases.
- A number of the signs along the route would benefit from cleaning to enhance their conspicuity, particularly in poor light conditions, as their sign faces are green in places.

8.0 TRAFFIC CALMING MEASURES

Currently there are no physical traffic calming features on the B1281 between the commencement of the 40mph speed limit and the C22 T-junction.

It should be noted that this aspect cannot be considered further as Statutory Regulations and indicates that physical traffic calming measures should only be introduced on roads with a speed limit of 30mph or below.

9.0 OTHER CONSIDERATIONS

PERMANENT SPEED INDICATING (FLASHING) SIGNS

- Speed Indicating Signs are often seen as the answer to reducing vehicle speeds.
- Research has shown that the affect of these signs on vehicle speeds diminishes the longer they remain in place. The optimum period for a sign to be in place is around 14 days with the effectiveness reducing significantly once the sign has been in place for more than 21 days.
- The positioning of the signs has to be carefully considered to avoid distracting a motorist's attention away from the hazards and features of the road environment which he or she should be concentrating on. In this case such a sign could distract attention away from pedestrians on the footway or crossing the road.

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- Signs will not be positioned in locations where there are junctions, accesses, crossing points or locations where distraction could be an issue contrary to road safety.
- This said it is acknowledged that where there are few options to physically reduce vehicle speeds, speed indicating signs can have their place in the tool box of measures and be a way of trying to do something to encourage drivers to reduce their speed.
- Following a request some time ago from residents of The Village, Durham County Council introduced a location for deployment of a Speed Indicator Sign as part of their rotational program in the area.
- It has been recognised that the existing speed indicator site for eastbound vehicles located on the north side of the road just west of The Village junction has limited impact.
- However it was sited to address approach speeds to The Village at the residents request.
- Unfortunately there was no location identified on the westbound approach to Castle Eden (where speeds are at their highest) due to the dense hedge/tree line abutting the running carriageway and being outside the 40mph speed restricted area.
- Due to the geography of the area there was physically little scope to place a speed indication device on the eastbound approach anywhere other than its existing location.
- Given the physical site constraints the existing location is deemed as the most appropriate location for sign deployment.

CHANGING THE JUNCTION PRIORITY AT THE B1281/C22.

- The priority has been considered at the C22 T-junction to decide if the priority of the junction could be changed to formalise the main northwest to east and vice versa traffic flow. The advantage of changing the priority being that the potential for failure to give-way incidents reduce for driver exiting the junction to travel northwest.
- While the advantage of removing the incidents of failure to give-way to south eastbound drivers is acknowledged, in considering the possibility of changing the priority in more detail, it has been found that there are far more disadvantages to the proposal and the possibility of accidents occurring could significantly increase.
- In brief the change would require the give-way road markings to be relocated to the C22 road for north west bound drivers. The location of the give-way would mean that visibility to the right of oncoming vehicles would be significantly restricted due to the field boundary.

NOT PROTECTIVELY MARKED

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- Also as vehicles turning right toward the Golf Club would have priority, vehicle speeds, although not excessive for the speed limit, would be higher thus the possibility of an accident occurring resulting in injury would increase.
- Drivers travelling on the B1281 south east bound who intend to travel to C22 (straight ahead) would have to stop in the middle of the junction until being able to move across the north westbound lane causing potential for collision (particularly rear end shunt incidents).
- Further to this, as there is limited road space, as vehicles travel in both directions around what would become a significant bend in the road, especially where larger vehicles are involved, the possibility of side swipe incidents are a possibility.
- A change would also increase the risk for pedestrians attempting to cross the road.
- In effect the disadvantages of changing the road markings to alter the priority of the junction far outweigh the advantages and would likely create a significant road traffic accident problem where one currently isn't recorded.

DEPLOYMENT OF SAFETY CAMERA

- Consideration has been given to ascertain if it would be feasible to deploy the Police mobile Safety Camera as an additional enforcement tool. Unfortunately due to the lack of any suitable safe parking area along the route it is not possible to deploy the Safety Camera for speed enforcement attention on the B1281.

10.0 RECOMMENDATIONS

- A) Re-paint the 40mph roundel at the commencement of the speed limit and consider the possibility of putting it on a red patch to enhance its conspicuity.
- B) Refresh the edge of carriageway marking on the south side entry to Castle Eden.
- C) Consider yellow thermoplastic rumble strips on the downhill approach to the speed limit and after the preceding left bend or consider red strips across the carriageway.
- D) Consider possible dragons teeth on the westbound approach to the commencement of the speed limit.
- E) Consider possible slows on red patches.
- F) Consider replacing the missing reflectors on the black and white hazard marker posts or replace the bollards if this is not possible.
- G) Replace the missing yellow backed left bend warning triangle.

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- H) Organise cleaning of the green sign faces.
- I) Police to undertake a 4 week Speed Enforcement campaign, the results of which to be reported back to residents through the PACT process.

11.0 CONCLUSION

It is evident that the concerns raised by the local Community are real and justified.

It is hoped that this report reflects that those concerns have been taken seriously by the Police and County Council and that the report shows that a detailed review of the current situation has been undertaken with practical recommendations made to try and alleviate the concerns raised where possible.

The recommendations in A) to H) as outlined above will be progressed by the County Council where possible, although, as with many things progression will in part depend upon finding the necessary finance to implement the measures.

The recommendation in I) will be progressed by the Police and results reported back to the local community.

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