

West End, Bishops Cannings

Speed Limit Assessment

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1.0 Introduction and background

This assessment has been undertaken at the request of the Devizes Local Highways and Footway Improvement Group (LHFIG) following concerns raised by Bishops Cannings Parish Council.

The Council has requested a speed limit assessment on West End between the junction with the A361 and the existing 30mph speed limit just west of the village hall crossroads. There has been concerns raised by the local residents which relate to the area around the village hall crossroads (West End / Chandlers Lane), specifically the speed of vehicles approaching it from the north (off the A361) and from the west (along West End). Both approach roads are classified at the national speed limit (60mph) until a short distance from the crossroads. Seven properties front the final section along West End, yet the 30mph sign is positioned immediately before the crossroads. The properties, and the entrance to the village car park, all lie within the 60mph speed limit. The Bishop Cannings Village Hall and The Bishop Cannings C of E Primary School are both located to the east of the crossroad.

West End is an unclassified road and for the majority of its length the national speed limit (60mph) applies.

The Department for Transport Circular 01/13 Setting Local Speed Limits sets out guidance as a basis for assessments of local speed limits, traffic authorities set local speed limits in situations where local needs and conditions suggest a speed limit which is lower than the national speed limit. Speed limits should be evidence-led and self-explaining and seek to reinforce people's assessment of what is a safe speed to travel. Speed limits should be seen by drivers as the maximum rather than a target speed.

Speed limits should not be used to attempt to solve the problem of isolated hazards, such as a single road junction or reduced forward visibility. The principal aim in determining appropriate speed limits should be to provide a consistent message between speed limits and what the road environments looks like, therefore, changes in speed limit need to be reflective of changes in the road layout and characteristics. This approach will provide consistency across the country for drivers.

The underlying aim should be to achieve a 'safe' distribution of speeds. The key factors that should be considered in any decisions on local speed limits are:

- History of collisions;
- Road geometry and engineering;
- Road function;
- Composition of road users;
- Existing traffic speeds; and
- Road environment.

While these factors need to be considered for all road types, they may be weighted differently in urban or rural areas. The impact on community and environmental outcomes should also be considered.

Circular 01/2013 Setting Local Speed Limits states that whilst traffic authorities should continue to routinely collect and assess both mean and 85th percentile speeds, mean averages should be used as the basis for determining local speed limits.

For clarity, the distinction between the mean and 85th percentile value is:

- Mean speeds are the average speeds that vehicles travel at
- 85th percentile speeds are the speeds at or below which 85% of vehicles are observed to travel under free-flowing conditions. This is a nationally recognised method of assessing traffic speeds. (Setting local speed limits, 2013).

What is a village?

The criterion for a 30mph limit is detailed in the Department for Transport Traffic Advisory Leaflet 01/04; Village Speed Limits, and is based on the amount of frontage development, with a requirement for 20 or more houses over a minimum length of 600 metres. This length may be reduced to 400 metres when the level of development density over this shorter length exceeds the 20 or more houses criterion and in exceptional circumstances a reduction to 300 metres is permissible. If there are just fewer than 20 houses, then the Highway Authority can make extra allowance for key buildings, such as a church, shop or school. The measurement of frontage development is based only on those houses that front onto the main road. It does not include groups of houses that access the main road from a side road. Frontage development density has to achieve an average of three houses per 100 metres throughout the length but particularly at the entrances to the limit. This ensures appropriate reinforcement of a village environment to the motorist. Please refer to Figure 1 below for an example. (DfT Traffic Advisory Leaflet 01/04 Village Speed Limits, 2004)

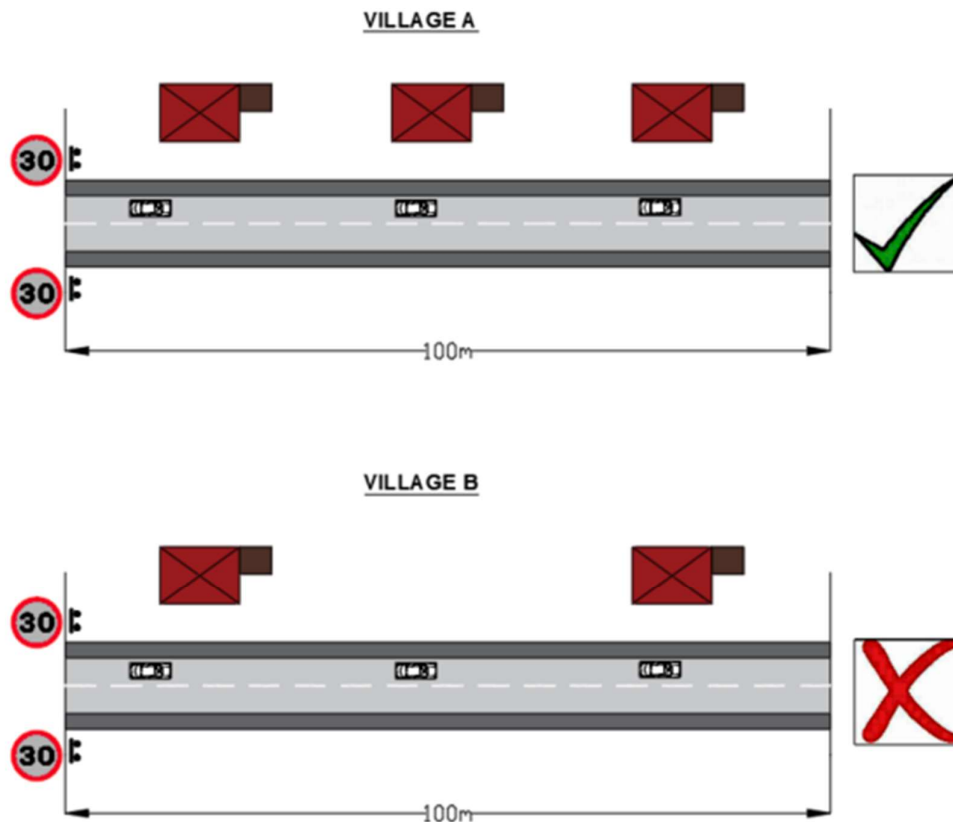


Figure 1 example of measure of density

Method of Analysis

The speed limit assessment process requires the calculation of time over distance to establish an average speed for each section of road being reviewed rather than the use of point speed data at a single location as would be collected by a traffic count survey. Generally, a total of seven journeys in each direction are made for each section of road under review and an average speed calculated from this analysis. The method of journey time analysis is considered a more robust analysis of vehicle speeds over the full length of each section to determine average speeds throughout the route rather than to rely on the use of point speeds which only offer a reading for vehicle speed at a single point of the route. This method ensures data is recorded for free-flowing traffic conditions.

Collision Data

The measurement of collisions is undertaken by establishing the number of recorded collisions that have taken place that have resulted in personal injury. Damage only and unrecorded incidents are not a material consideration. Collision data covering a 6-year period is used for assessment purposes, which is sourced from the Police Stats19 database.

The use of personal injury collisions is universal across the United Kingdom not only in the assessment of speed limits but also in identifying schemes to improve highway safety. This accords with the principles set out in the Road Safety Code of Good Practice. (A Road Safety Good Practice Guide for Highway Authorities, 2006)

Legal Traffic Regulation Order Process

There must be a legal basis for any speed limit change, it must meet the required criteria otherwise the restriction can be challenged in court. As a moving vehicle offence, the enforcement authority for speed limits is the Police, therefore agreement and support must be sought from them before any changes are implemented.

The implementation of any new or change to an existing speed limit requires the legal procedure to introduce a Traffic Regulation Order (TRO) to be followed. This process requires formal advertisement and consultation providing members of the public with an opportunity to comment on the proposal. The associated costs with conducting this legal process are in the region of £3,000 (current cost as of August 2024) and it can take between twelve to eighteen months to complete.

2.0 Data Collection

2.1 Site observations

The route is considered as a single section as its characteristics are generally consistent along its length.

Section 1

The section commences at the village sign “Bishop Cannings” near the junction with A361 and continue eastwards to the 60 / 30 mph speed limit terminal sign at the entrance to the village car park, approximately 70m from the give way priority junction. The speed limit on this section is national speed limit (i.e. 60mph).

The environment is rural with small verge and hedges on either side of the road. There are a number of farm buildings and a farm shop on both sides of the road around the bend at the start of the section just off the A361. Then the road is straight with green pasture on both sides. There are seven properties that front on to the final section of West End and a village car park just before the 30mph / 60mph terminal sign. The properties and the entrance to the village car park all lie within the 60mph speed limit.

2.2 Journey time data

Journey time data has been collected. The method employed is to follow other vehicles, in free flowing traffic conditions, as they travel the route matching their speed. This gives an insight into how drivers using the route behave in terms of driven speeds.

Each section was driven 7 times in both directions, following a variety of vehicles/drivers, and the journey time for that section recorded. It should be noted that the length of each section varies.

<u>Journey Run Number</u>	<u>Section 1</u>
1	00:48.32
2	00:47.10
3	00:50.21
4	00:51.35
5	00:48.43
6	00:51.33
7	00:50.25
Average Times:	00:49.71

Table 1: Journey Time Data

Note: The fastest & slowest results from each section timing will be disregarded when calculating the average time for that particular section to produce more reliable results by disregarding outliers.

2.3 *Traffic speeds and volumes*

The journey time data shown in section 2.2 is used to calculate mean (average) speeds of vehicles on the route. Table 2 shows the mean speeds for each section and the accompanying calculation data.

Vehicle volumes are recorded using a radar device mounted to street furniture. This device captures the number and classification of vehicles as they pass. The speed data collected by this device is not used for the speed limit assessment process as it gives point speeds only.

The device was located on the 30mph / 60mph speed limit sign post adjacent to the village car park for a 7-day period in February 2025.

As the village car park is being used by parents picking up school children and therefore would not accurately reflect the traffic flows further to the west of the car park, so it was estimated the weekday day total is reduced by around 200 per day. This recorded an annual average daily traffic (AADT) volume of 335.

Road Sections	Description	Average Journey Time	Section Length (Metres)	Speed (Metres per Second)	Mean Speed (Miles per Hour)
Section 1	Village sign of Bishop Cannings to 60/30mph change of speed limit	00:49.71	668	13.4	30.1

Table 2: Mean Vehicle Speeds

2.4 *Collision data*

An interrogation of the Police collision database indicates there have been 5 reported personal injury collisions in the vicinity of the West End in the 72 months preceding this report. However, none of collisions were within the extent of West End considered in this assessment.

There were four collisions at the village hall crossroads. Two of the collisions involved drivers failing to give way at the crossroads coming from the west travelling along West End. There was one collision caused by vehicle not giving way coming from the east side of the crossroads, so that is not relevant. There was another collision caused by misuse of the handbrake so again that is not relevant.

The remaining collision occurred at the junction with A361, where a vehicle travelling on the A361 was turning right into West End was struck from the rear. This collision occurred on the A361 so is not relevant.

2.5 *Local concerns*

Local residents have expressed their concerns to Bishops Cannings Parish Council regarding road and pedestrian safety in the area around the village hall crossroads (West End / Chandlers Lane). Specifically the speed of vehicles approaching it from the north (off the A361) and from the west (along West End). Both approach roads are classified at the national speed limit until a

very short distance from the crossroads. Seven properties front the final section along West End, however the 30mph sign is positioned immediately before the crossroads. The properties, and the entrance to the village car park, all lie within the 60mph speed limit.

The Bishop Cannings Village Hall and The Bishop Cannings C of E Primary School are both located to the east of the crossroad, whereas the car park is located to the west of the crossroads. There is at least one mother who walks her young daughter along this road each day to school. There is currently no provision of footway facilities.

There is currently a Parish Council planning application (Ref PL/2024/08280) to enlarge the existing car park at the crossroads which is with Wiltshire Council and is currently under consideration. Central to the application, which is supported by Wiltshire Council Highways, is the creation of a safer crossing point from the car park to the village hall. This will involve a build-out with a low kerb, together with a dropped kerb crossing on both sides, with tactile paving and bollards.

3.0 Analysis

It is set out in Circular 01/13 that 'Drivers are likely to expect and respect lower limits and be influenced when deciding on what is an appropriate speed, where they can see there are potential hazards, for example outside schools, in residential areas or villages and in shopping streets.'. The DfT therefore state that a principal aim for determining appropriate speed limits should be to provide a consistent message between the speed limit and what the road looks like and for changes in speed limit to be reflective of changes in the road layout and character.

The following are important factors when considering what is an appropriate speed limit:

- history of collisions, including frequency, severity, types and causes
- road geometry and engineering (width, sightlines, bends, junctions, accesses and safety barriers and so on)
- road function (strategic, through traffic, local access et cetera)
- composition of road users (including existing and potential levels of vulnerable road users);
- existing traffic speeds
- road environment, including level of road-side development and possible impacts on residents (e.g. severance, noise, or air quality)

It is recognised within the circular that road users perceive risks and appropriate speeds differently, with drivers often not having the same perception of the hazards of speeds as people on foot, cycles or horseback. The needs of vulnerable road users must be taken into account.

The guidance does however also state '*Speed limits should not be used to attempt to solve the problem of isolated hazards, for example a single road junction or reduced forward visibility such as at a bend, since speed limits are difficult to enforce over such a short length. Other measures, such as warning signs including vehicle activated signs, carriageway markings, junction improvements, superelevation of bends and new or improved street lighting, are likely to be more effective in addressing such hazards. Similarly, crossings or, in rural areas, the provision of adequate footways can be a more effective means of improving pedestrian safety than lowering a speed limit over a short distance*'.

The guidance also advises that if a speed limit is set unrealistically low for a particular road function and condition, it may be ineffective and drivers may not comply with the speed limit. If many drivers continue to travel at unacceptable speeds, the risk of collisions and injuries would increase.

It may well be that a speed limit need not be changed if the collision rate can be improved or wider quality of life objectives can be achieved through other speed management measures, or other measures. These alternative measures should always be considered before proceeding with a new speed limit.

It is considered that the section of the assessed route on West End would be classed as part of the rural road network when considering the criteria set out in the circular.

The following table sets out the speed limits for single carriageway roads in rural locations as would be applicable to the West End at Bishop Cannings.

Speed limit (mph)	Where limit should apply:
60	Recommended for most high quality strategic A and B roads with few bends, junctions or accesses.
50	Should be considered for lower quality A and B roads that may have a relatively high number of bends, junctions or accesses. Can also be considered where mean speeds are below 50 mph, so lower limit does not interfere with traffic flow.
40	Should be considered where there are many bends, junctions or accesses, substantial development, a strong environmental or landscape reason, or where there are considerable numbers of vulnerable road users.

Table 3: Rural Speed Limit Criteria - Circular 01/13

The route being assessed comprises of one section, i.e. **Section 1**. The Table on the drawing in Appendix A indicates that the assessed speed for **Section 1** is 50mph, whereas the existing speed limit is 60mph. The section is largely rural with a number of farm buildings around the bend at the start of the section just off the A361. Then the road is open and straight with green pasture on both sides. There are seven properties that front the final section of West End and a village car park just before the 60mph / 30mph sign terminal. The measured mean speed is 30.1mph. This rural road has low actual driven speeds and has some of the characteristics for 40mph as per Table 2 in DfT Circular 01/2013. Therefore, our recommendation is to reduce the speed limit to 40mph.

Although there is no injury collisions recorded on Section 1, there are two collisions involving drivers failing to give way at the village hall crossroads coming from the west along West End. The 30mph speed limit can be extended a further 100m to the west (towards the A361). This should slow traffic down approaching the crossroads and the car park would be within the 30mph speed limit. The 100m length for which the 30mph speed limit is extended meets the criteria for a 30mph speed limit on this rural road, as set out in TAL 1/04 (see p5 of this report). There needs to be a minimum of 3 properties with frontage accesses for each 100 metres. The proposed location of the 40mph / 30mph speed limit terminal is shown on drawing on Appendix A. Beyond this point, further to the west, the criteria for a 30mph speed limit are not met.

There is currently a planning application (see section 2.6) which proposed minor highway improvements from the car park towards the village crossroads. The extension of the 30mph speed limit would complement these proposed highway improvements. It is recommended that as part of the highway improvements that the road markings at the crossroads are refreshed to make the junction more conspicuous.

4.0 Recommendation and Costs

The costed recommendation set out in this report is for the introduction of a 40mph speed limit and relocating the 40mph/ 30mph speed limit terminal 100m west of the existing terminal point in section 3. The likely associated costs for implementation are set out below.

<u>Description</u>	<u>Cost</u>
Traffic Regulation Order (TRO)	£3,000
Temporary Traffic Management	£2,000
Signing	£3,000
Associated electrical costs	Not applicable
Road Markings	£2,000

Table 4: Cost estimate

5.0 References

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6.0 Appendix A – Speed limit assessment plans