

20mph Speed Limit Assessments

The Broadmead Estate, Trowbridge

Wiltshire Council

May 2022

20mph SLAs_Broadmead Estate Report

Notice

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1. Introduction and background

Following the publication of Wiltshire Council's policy for 20mph speed limits, the authority made a commitment to undertake assessments to determine the feasibility of 20mph speed restrictions where requests are made, supported and funded by Community Area Transport Groups.

A request to assess the Broadmead Estate, Trowbridge for a 20mph speed restriction was raised by Trowbridge Town Council and discussed at a Community Area Transport Group (CATG) meeting and subsequently prioritised for assessment in 2021.

This report sets out the analysis of this location against "Wiltshire's Policy on 20 mph Speed Limits and Zones" and the Department for Transport (DfT) Circular 01/2013 "Setting Local Speed Limits".

This guidance will be used to determine which areas are suitable for a 20mph speed restriction.

Trowbridge is the county town of Wiltshire, England, on the River Biss in the west of the county. It is near the border with Somerset and lies 8 miles (13 km) south-east of Bath, 31 miles (49 km) south-west of Swindon and 20 miles (32 km) south-east of Bristol.

The area of the town under assessment (the Broadmead Estate) is currently subject to a 30mph speed limit. The Broadmead estate comprises several roads within the radial roads of Westwood Road/Cockhill/Bradford Road and Wingfield Road, to the west of Trowbridge town centre.

The full extent of the area studied is set out in **Appendix A**.

2. Data Collection

Average speed and volume of traffic was recorded using a device called an Automated Traffic Counter (ATC), provided by the traffic count company, Monisyst. This is a roadside unit with sensors placed across the road.

An ATC was installed at six locations to record data from 1st November through to 7th November 2021. The approximate locations of the counters are shown in **Appendix A**.

Table 1, below, sets out a summary of the results of the ATCs:

ATC Location Reference	Total Daily Traffic Volume (7-day average)	85th %tile Speed (mph)	Mean Average Speed (mph)
Site A – Brook Road (west of Widbrook Meadow)	2387	31.32	27.30
Site B – Brook Road (east of Acacia Crescent)	2732	22.48	19.10
Site C – Broadmead (north of Clipsham Rise)	688	29.19	24.50
Site D – Chilmark Road (south of Chepston Place)	496	25.61	20.00
Site E – Chilmark Road (east of Rosedale Gardens)	825	28.07	23.40
Site F – Sherbourne Road	837	30.53	26.10

Table 1 – Summary of ATC results

3. Collision Data

An investigation into the Police Collision Database shows that there were no Personal Injury Collisions recorded in the area of interest of the Broadmead Estate, Trowbridge in the 36-month period up to the end of April 2021. Therefore, Collision Data Analysis has not been undertaken for this assessment area.

4. Analysis against Wiltshire Council Policy

It is important to remember that all speed limits should be set where it can be expected that overall compliance with the limit can be realistically achieved. Higher recorded speeds are generally not reduced with signing alone and are likely to require hard engineering measures such as alteration to the road layout and/or road humps.

With the above in mind, there are two different types of 20mph speed restriction – a 20mph Zone or a 20mph Speed Limit.

Wiltshire Council policy has considered previous studies into 20mph speed limits and zones as well as the guidance from DfT Circular 01/2013. Wiltshire Council policy identifies the options to consider when implementing 20mph zones and limits within Wiltshire:

4.1. 20mph Zones:

20mph zones are defined as areas subject to a 20mph speed restriction which cover a number of roads and are supported by the appropriate traffic order and signs.

Typically, there will be traffic calming measures at regular intervals throughout the zone to ensure speeds remain consistent in the area. This could include the addition of road humps and raised junctions as well as build outs, chicanes or pinch points.

20mph zones to be considered where:

- Roads are restricted to a 30mph speed limit
- A proven history of road user conflict with vulnerable users such as child pedestrians is apparent.
- New residential developments
- Where there is an alternative route existing, so drivers are able to avoid the zone.
- On major streets if there is a significant number of journeys on foot or bicycle and this outweighs the disadvantage of longer journeys for motorists.

4.2. 20mph Speed Limits:

20mph limits are defined as streets where the speed restriction has been reduced to 20mph but where there are no physical calming measures. Drivers are alerted to the restriction by the use of terminal and repeater signs only.

20mph Speed Limits to be considered where:

- Mean before speeds are at or below 24 mph (if they are just above this threshold lighter touch engineering measures to reduce speed may be implemented)
- On roads which do not have a strategic function or where motor vehicle movement is not the primary function.
- On major streets if there is a significant number of journeys on foot or bicycle and this outweighs the disadvantage of longer journey times for motorists.
- In rural areas where the location in addition to the above conditions meets the definition of a village as set out in Traffic Advisory Leaflet 01/04 – “Village Speed Limits”.

5. Recommendation

Results have shown that the mean average traffic speed within the assessed area (6 sites) of the Broadmead Estate varies considerably.

For example, Site A (Brook Road – west of Widbrook Meadow) which is the nearest site to the A366 Wingfield Road has mean average speed of 27.30mph, which is significantly above the 24.00mph threshold. Whereas Site B (Brook Road – east of Acacia Crescent), the nearest site to Cockhill/Bradford Road has a mean average speed of 19.10mph, which is comfortably within the 24.00mph threshold.

As Site A has a mean average speed of 27.30mph, it is not suitable to implement a 20mph speed limit at this location. It is proposed that this section of Brook Road is either:

- retained with its existing 30mph speed limit OR,
- that engineering measures are implemented to reduce vehicle speeds alongside a 20mph speed limit.

Therefore, two Options are presented below as separate Recommendations.

Site F (Sherbourne Road), which joins Brook Road, has a mean average speed of 26.10mph. These average speeds are thought to be relatively higher than the other roads in the Broadmead Estate due to the length of Sherbourne Road and its downward gradient towards Brook Road. As the mean average speeds of the roads leading up to Sherbourne Road (Sites D & E on Chilmark Road) are under 24mph, it is expected that the proposed 20mph speed limit on these roads will also contribute to a reduction in the mean average speed on Sherbourne Road to within 24mph too. Therefore, the only engineering measures proposed on Sherbourne Road will be 20mph speed limit signs, supported by 20mph roundels on the carriageway at both ends and near its middle.

5.1. Option 1 – traffic calming measures on Brook Road

Site A has a mean average speed of 27.30mph, therefore traffic calming measures (such as speed humps, raised tables, etc.) will be installed alongside 20mph speed limit signs for the section of Brook Road from its junction with Wingfield Road to its junction with Sherbourne Road.

Sherbourne Rd would benefit from some extra 20mph roundels and 20mph repeater signs rather than the full traffic calming measures, as discussed above.

The four other ATC Sites in the Broadmead Estate either had mean average speeds below the 24.00mph threshold (Sites B, D, and E) or just above (Site C – 24.50mph). Therefore, based on the analysis of the speed and collision data for the area and comparing these results with Wiltshire Council Policy on implementing 20mph speed limits and zones, it is recommended these locations are suitable for a 20mph speed limit.

5.2. Option 2 – retention of 30mph speed limit on Brook Road

Site A has a mean average speed of 27.30mph, therefore it is not suitable for a 20mph speed limit and will retain its existing 30mph speed limit for the section of Brook Road from its junction with Wingfield Road to its junction with Sherbourne Road.

Sherbourne Rd would benefit from some extra 20mph roundels and 20mph repeater signs rather than the full traffic calming measures, as discussed above.

The four other ATC Sites in the Broadmead Estate either had mean average speeds below the 24.00mph threshold (Sites B, D, and E) or just above (Site C – 24.50mph). Therefore, based on the analysis of the speed and collision data for the area and comparing these results with Wiltshire Council Policy on implementing 20mph speed limits and zones, it is recommended these locations are suitable for a 20mph speed limit.

Please see **Appendix B** for preliminary proposal drawings for both Options.

6. Costs

6.1. Option 1

It is estimated that the cost to implement this scheme would be in the region of £25,800 to include development, legal fees and installation.

Please note this cost is only provisional, and no detailed design or assessment of solutions has been undertaken. Consequently, costs could vary depending on site constraints or other issues identified during the design process.

Item:	Cost Estimate:
Traffic Regulation Order	£2,000
Traffic Calming measures (humps, ramps, etc.)	£10,000
Signing	£7,000
Road Markings	£1,800
Traffic Management	£5,000
Total	£25,800

6.2. Option 2

It is estimated that the cost to implement this scheme would be in the region of £9,800 to include development, legal fees and installation.

Please note this cost is only provisional, and no detailed design or assessment of solutions has been undertaken. Consequently, costs could vary depending on site constraints or other issues identified during the design process.

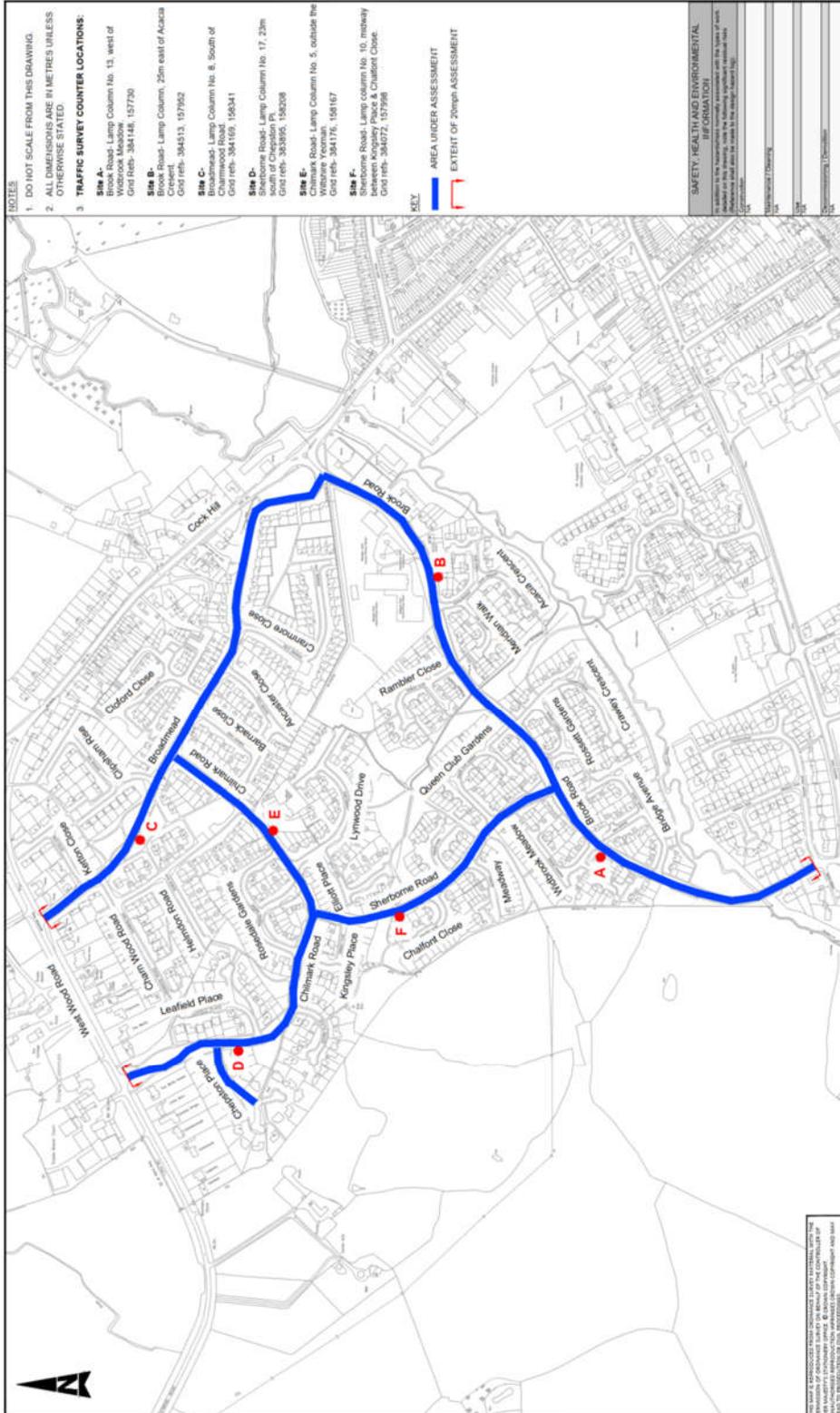
Item:	Cost Estimate:
Traffic Regulation Order	£2,000
Signing	£4,000
Road Markings	£1,800
Traffic Management	£2,000
Total	£9,800

Appendices



Appendix A. Drawings

A.1. Speed data



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