

Road Safety Audit 1093-RSA-BETA

Please notify the System Administrator of any queries, comments, errors or omissions.

1. Site Access Standards

- a) The site access has been designed to the relevant design standards published by the DfT within Manual for Streets 2 and Design Manual for Roads and Bridges (DMRB) and set out below.
- b) The visibility splays for roads above 40 mph are set out in DMRB CD 123. The setback (x distance) is the point where a driver would stop to make sure that it is clear to move into the adjoining carriageway safely and allows for the front of the vehicle in front of the driver to be behind the edge of the carriageway. The minimum distance for a direct access junction is 2m, and for a priority junction is 2.4m, from the centreline of the access. As stated in the DMRB standard, direct access shall only be used for a single dwelling or field where the access is subject to fewer than 50 movements a week. A priority junction shall be provided where the movements are expected to be higher. Based on the likely number of vehicle movements, which would exceed 50 per week, the requirement is for a priority junction.
- c) The stopping sight distance (SSD) is the minimum distance for a vehicle to stop to avoid a collision. The SSD is calculated from the reaction and deceleration time of a type of vehicle. The SSD (y distance) is calculated on the design speed or speed measurement for a direct access or priority junction that is not a through route.
- d) The speed of the major road for determining point Y in the visibility splay shall be based on:
 - design speed only for direct accesses and priority junctions on new major roads;
 - design speed only for priority junctions that form part of a through route on existing major roads; and,
 - design speed or speed measurement for direct accesses and priority junctions that do not form part of a through route on existing major roads.
- e) A speed survey has been carried out at the Hobbs Field access on Saint Hill Road. The survey was carried out using a radar speed gun following the guidance set out in DMRB CA 185 Vehicle Speed Measurement. The survey was carried out in free-flow conditions on 5th December 2024 and 9th December 2024 in both a northerly and southerly direction, with a sample of 200 vehicles in each direction. The full survey, contained in Appendix A, shows the highest mean speed of 34.1 mph northbound and 33.9 mph southbound. The 85th percentile speed (top speed ranked in order with the highest 15% removed) was 40 mph northbound and 38 mph southbound.

- f) To calculate the SSD from the 85th percentile speed, the following formula is used (DfT Manual for Streets 2, September 2010):
- v is the 85th percentile measured speed from the recent survey calculated as 17.88 m/s northbound and 16.99 m/s southbound.
 - t is a 2 seconds reaction time (MfS 2)
 - d is 0.375g Absolute minimum and 0.25g Desired minimum (MfS 2)
 - a is assumed at flat grade
- g) The following values have been used for the site access to confirm the required SSD:
- SSD northbound Absolute min = $17.88 \times 2 + 17.88^2/2(0.375+0.1 \times 0\%)$
 - SSD northbound Desired min = $17.88 \times 2 + 17.88^2/2(0.25+0.1 \times 0\%)$
 - SSD southbound Absolute min = $16.99 \times 2 + 16.99^2/2(0.375+0.1 \times 0\%)$
 - SSD southbound Desired min = $16.99 \times 2 + 16.99^2/2(0.25+0.1 \times 0\%)$

 - SSD northbound Absolute min = 76.17m
 - SSD northbound Desired min = 96.90m
 - SSD southbound Absolute min = 73.18m
 - SSD southbound Desired min = 92.87m
- h) The visibility at the current access has been reviewed and will require the removal of hedging and trees to meet the required visibility. This is shown on the attached plan in Appendix B.
- i) Based on the predicted vehicle movements the access would meet the requirements for a priority junction in accordance with standards are set out in DMRB CD 123. For a simple priority junction where provision is made for a design vehicle the corner radii on a rural road shall be 15m. The junction arrangement is shown on Drg. No. in Appendix B.
- j) The design vehicle is a 15m luxury coach and the turning movement in both directions entering and exiting the proposed access are shown on Drg. Nos. in Appendix B. The junction geometry will allow for a 15m luxury coach to leave the main road safely.
- k) A Stage 1 Road Safety Audit will be carried out for the site access.