

08th January 2023
Our Ref: 100307/RS/C01

BY EMAIL ONLY

FAO: Craig Perks
Derbyshire County Council
County Hall
Matlock
Derbyshire
DE4 3AG

Dear Craig,

CADLEY HILL ROAD, SWADLINCOTE

This response letter has been prepared in relation to your most recent comments received on 02nd December 2022. We have also amended our drawing reference '100307_01_0100_01-Rev.G preliminary access design' accordingly.

Taper Lengths

Taper lengths have been amended as requested. This has resulted in the existing kerb line north of the proposed access junction being pushed further into the existing verge area. Highway widths of 3.5m have been maintained adjacent to the pedestrian refuge island, tapering back to 3m either side of this proposed island. The associated proposed road markings have also been amended.

Visibility Splays

Visibility splays have been maintained as per our previous design at 100.5m to the west of the site access (southbound approach) and 97.5m to the east of the site access (northbound approach).

A speed survey was conducted which recorded 85th percentile speeds for these approaches at 39.4mph and 38.8mph respectively.

The 85th percentile speeds have been used to calculate the visibility splays using the formula presented in Manual for Streets, as per the Development Control Engineer Devinder Singh's recommendations within email dated 14 June 2021.

The 85th percentile speeds are shown on the spreadsheet previously issued titled 'Swadlincote ATC.' On this spreadsheet there are two tabs. On the tab labelled 'Northern site' the southbound 7-day average 85th percentile speed should be taken as this is the direction of traffic travelling toward the site. On the table labelled 'southern site' the northbound 7-day average 85th percentile speed should be taken as this is the direction of traffic travelling toward the site from the opposite direction.

The formula for calculating the SSD (in metres) found in the Manual for Streets guidance document is as follows:

$$SSD = vt + v^2 / 2d$$

The 2 calculations based on the measured 85th percentile speeds mentioned above are as follows:

39.4mph

$$SSD = vt + v^2 / 2d$$

$$(17.61338 \times 2) + 17.61338^2 / 2 \times 2.45 = 98.539m$$

38.8mph

$$SSD = vt + v^2 / 2d$$

$$(17.34515 \times 2) + 17.34515^2 / 2 \times 2.45 = 96.089m$$

The calculated visibility splay lengths based on the above formula show that a slightly lower visibility splay length is acceptable, however we have shown the actual visibility splays achievable without impacting any 3rd party land. Based on this, we believe the visibility splays drawn are correct and should be acceptable.

Visibility splays have also been amended to be drawn to the kerb without any offset, as per your recommendation.

Yours sincerely,



Raj Somal BSc (Hons)

Director

raj.somal@diceconsult.co.uk