Roberts Highway Consultants	Scheme:	Wirksworth Road, Whatstandwell	Page No :
	Client:	Steven Greaves	1 of 1
	Job Ref:	RHC-25-235	
	Date:	26/01/2026	
	Calcs By:	AR	

Visibility towards Northbound traffic

v	13.54	Speed in m/s	Dry ATC 85th %ile Speed	30.30	mph
t	1.5	Reaction time (seconds)			
d	3.68	Deceleration rate (m/s²)	Heavy veh % flow	16.0	%
a	7.1	Longitudinal gradient (%)	Gradient	7.1	%

SSD= vt + v2/2(d+0.1a) From Manual For Streets 2

vt	20.31				
v2	183.40				
2(d-0.1a)	5.94		Downhill approach visibility length (m)	53.69	m
2(d+0.1a)	8.78		Uphill approach visibility length (m)	43.70	m

Visibility towards Southbound traffic

v	14.88	Speed in m/s	Dry ATC 85th %ile Speed	33.30	mph
t	1.50	Reaction time (seconds)			
d	3.68	Deceleration rate (m/s²)	Heavy veh % flow	14.0	%
a	3.50	Longitudinal gradient (%)	Gradient	3.5	%

SSD= vt + v2/2(d+0.1a) From Manual For Streets 2

vt	22.32				
v2	221.51				
2(d-0.1a)	6.66		Downhill approach visibility length (m)	58.08	m
2(d+0.1a)	8.06		Uphill approach visibility length (m)	52.31	m

Design Speed	**Vehicle Type**	**Reaction Time**	**Decel. Rate** (where g=9.81m/s²)	
60 kph and below	Light vehicles	1.5s	4.41 m/s²	
	HGV's	1.5s	3.68 m/s²	
	Buses	1.5s	3.68 m/s²	
Above 60kph	All	2.0s	3.68 m/s²	(Absolute min SSD)
	All	2.0s	2.45 m/s²	(Desirable min SSD)

Paragraph 10.2.5 of Manual for Streets outlines that it is recommended for assessments of Sight Stopping Distance, an allowance is made by adding 2.4m to the distance calculated. Roberts Highway Consultants Limited have applied a 2.5m increase for robustness.
Paragraph 1.3.2 of Manual for Streets 2 stipulates that for all design purposes, it is recommended that as a starting point for any scheme affecting non-trunk roads, designers should start with MfS (including the formula for calculating Sight Stopping Distance).
No gradient has been shown to ensure for a robust assessment.