Technical Note – A4 Chippenham (Pewsham) to Calne Speed Limit Assessment

References:

1. Department for Transport Traffic Advisory Leaflet 1/04 – Village Speed Limits
2. Department for Transport Traffic Advisory Leaflet 2/06 – Speed Assessment Framework
3. Department for Transport Circular 01/2013 – Setting Local Speed Limits
4. Speed Limit Strategy – Wiltshire County Council July 2007
5. Atkins A4 Chippenham (Pewsham) to Calne speed limit assessment drawings numbered 5215073-ATK-DR-040 & 041 (sheets 1 & 2).

The team used the information above to produce the framework drawing indicated at Reference 5 in accordance with the DfT Traffic Advisory Leaflets and Circular. The calculation in the table based on government advice produces assessed speed limits as shown. Recorded injury collisions are a significant part of the assessment process according to the DfT. There is then the opportunity for the experienced engineers to use that assessed limit and other information, such as environmental factors (layout of the road, number of accesses onto the highway, nature of the traffic, etc.) to produce a recommended speed limit.

Traffic volumes were measured over a week and vehicle injury collision data obtained from the police records for the most recent six years.

There were a total of thirty-one injury collisions over the six-year period, one resulting in fatal injuries, six in serious injuries, the other twenty-four involved slight injury. Most of these collisions resulted in more than one casualty, but the numbers shown on the table are for collisions, not casualties.

The mean speed of traffic is measured in accordance with the requirements in the documents above. This is achieved by undertaking journey time surveys. Each section of the route is timed whilst following other vehicles to gain a true reflection of how the road is driven by the general public. This is repeated a number of times to determine an average journey time and hence the mean speed is derived.

The following are comments explaining the recommended speed limits:

Section 1: The existing speed limit is 40mph, the measured speed of traffic was 29.8mph, the assessed limit is 40mph. It is therefore recommended that the speed limit should remain at 40mph.

Section 2: The existing speed limit is 60mph, the measured speed of traffic was 48.0mph, the assessed speed limit is 60mph. It is recommended that the speed limit is lowered to 50mph to try to reduce the number of injury collisions. The existing speed of traffic fits in with this speed limit and it will reduce the number of speed limit changes on the route. It will also encourage drivers to keep to a lower speed either side of this section, especially the approach to Studley Lane crossroads.

Section 3: The existing speed limit is 50mph, the measured speed of traffic was 37.7mph, the assessed speed limit is 50mph. All seven of the reported collisions on this section occurred at or very close to the Studley Lane crossroads. Further analysis of these collisions and engineering recommendations may be able to reduce the incidence of injuries at this location. The recommended speed limit is 50mph.

Section 4: The existing speed limit is 60mph, the measured speed of traffic was 50.9mph, the assessed speed limit is 60mph. It is recommended that the speed limit is lowered to 50mph. The existing speed of traffic fits in with this speed limit and it will reduce the number of speed limit changes on the route. It will also encourage drivers to keep to a lower speed either side of this section, especially the approach to Derry Hill junction and also Studley Lane crossroads.

Section 5: The existing speed limit is 40mph, the measured speed of traffic was 36.5mph, the assessed speed limit is 50mph. Partly because of the Derry Hill junction in this section, it is recommended that the limit remains at 40mph.

Section 6: The existing speed limit is 50mph, the measured speed of traffic was 44.9mph, the assessed speed limit is 60mph but it is recommended that the speed limit remains as existing at 50mph.

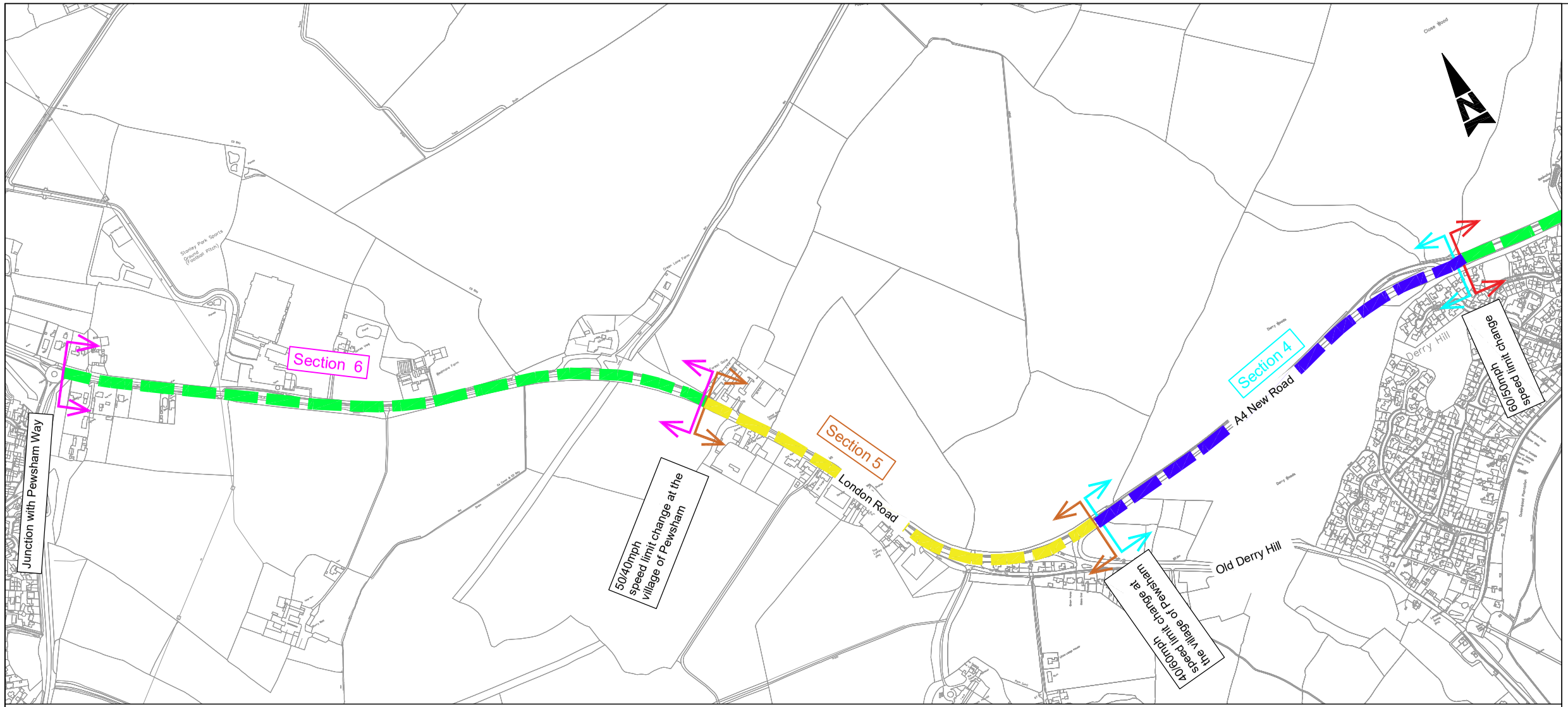
Rev 1.0

Status S2

Drawing Number 5215073 - ATK - DR - 041

DO NOT SCALE

A3



Notes

1. Limits of work are approximate and are to be agreed on site with the Engineer.

Existing 60mph Speed Limit

Existing 50mph Speed Limit

Existing 40mph Speed Limit

Section 4

Section 5

Section 6

A4 Chippenham (Pewsham) to Calne

Sections	Description	Section Length (Metres - Taken from AutoCAD OS Tile)	Existing Speed Limit (Miles per Hour)	AADT (Average Annual Daily Traffic - Taken from Traffic Counts)	Collisions		Collision Rate (per 100 million vkm)	Mean Speed (Miles per Hour)	Assessed Speed Limit (Miles per Hour)	Recommended Speed Limit (Miles per Hour)	Comments
					All	KSI (Killed or Seriously Injured) (Fatal or Severe)					
Section 4 - 00070	Between 60/50mph speed limit change to 40/60mph speed limit change at village of Pewsham	810	60	15718	1	0	3.590	50.900	60	50	It is not recommended that the speed limit changes too frequently on a route. The two sections to the east of this section will be 50mph and the one to the west is 40mph. 50mph is recommended for this section. The mean measured speed was close to 50mph.
Section 5 - 00064	40/60mph speed limit change to 50/40 mph speed limit change at the village of Pewsham	763	40	10960	2	1	10.920	36.500	50	40	The assessed speed limit is 50mph. Although this may be acceptable and would give a consistent speed limit in this area, it is recommended that the speed limit remains as existing at 40mph. This section includes the junction with Old Derry Hill.
Section 6 - 00057	50/40 mph speed limit change at the village of Pewsham to junction with Pewsham Way	1163	50	10960	2	1	7.160	44.900	60	50	The existing speed limit seems to be working satisfatorily so it is recommended that the speed limit remains at 50mph.

Postal Area: SN11 0 RR to SN15 3RW
USRN: 83800024
OS Grid Ref: 398865 171215 to 393742 172167
Philips Street Atlas: P.79 B5 to F3, P80 A3 to F3
Road Speed Limit: Various

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING SIGNIFICANT RESIDUAL RISKS

CONSTRUCTION
(ENTER 'NONE' IF APPLICABLE)
MAINTENANCE/CLEANING
(ENTER 'NONE' IF APPLICABLE)
USE
(ENTER 'NONE' IF APPLICABLE)
DECOMMISSIONING/DEMOLITION
(ENTER 'NONE' IF APPLICABLE)

Stat	Purpose of Issue	Date	Auth	Rev	Description	By	Date	Chk'd	Auth
S2	For Information	03/10/22	KNB	1.0	First Issue	FC	03/10/22	AP	KNB

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Client: Wiltshire Council

Project: Speed Limit Reviews 2021 - 2022

Title: A4 Chippenham (Pewsham) to Calne Sheet 2

Sheet Size	Original Scale	Designed/Drawn	Checked	Authorised
A3	N.T.S	FC Date 21/09/22	AP Date 03/10/22	KNB Date 03/10/22

Status	Drawing Number	Rev
S2	5215073 - ATK - DR - 041	1.0

File: 5215073 - ATK - DR - 040 A4 Chippenham to Calne.dwg
Date: Oct 18, 2022 - 4:27pm Plotted by: CHINNSSS

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Rev 1.0

Drawing Number 5215073 - ATK - DR - 040

Status S2

DO NOT SCALE

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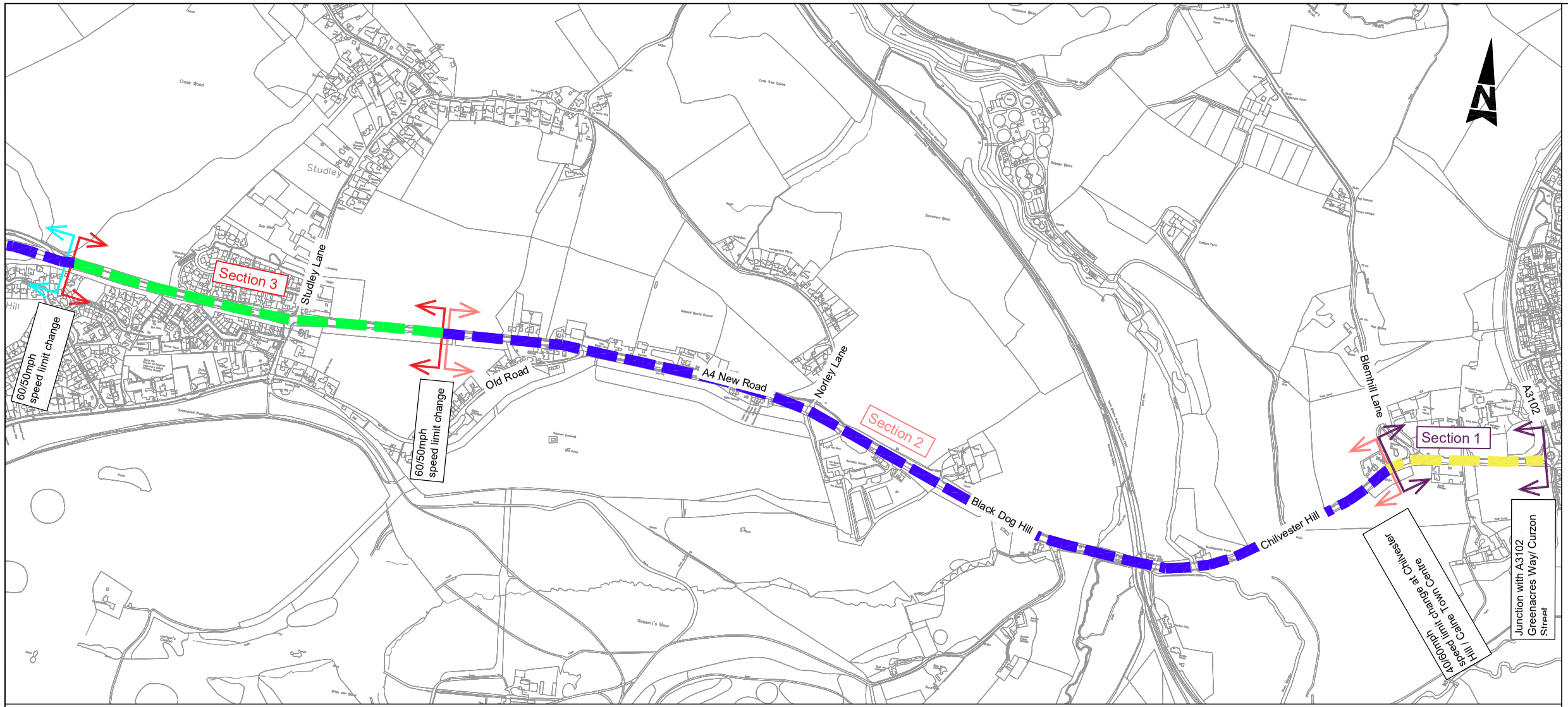

Notes

1. Limits of work are approximate and are to be agreed on site with the Engineer.

Existing 60mph Speed Limit

Existing 50mph Speed Limit

Existing 40mph Speed Limit

Section 1

Section 2

Section 3

A4 Chippenham (Pewsham) to Calne

Sections	Description	Section Length (Metres - Taken from AutoCAD OS Tile)	Existing Speed Limit (Miles per Hour)	AADT (Average Annual Daily Traffic - Taken from Traffic Counts)	Collisions		Collision Rate (per 100 million vkm)	Mean Speed (Miles per Hour)	Assessed Speed Limit (Miles per Hour)	Recommended Speed Limit (Miles per Hour)	Comments
					All	KSI (Killed or Seriously Injured) (Fatal or Severe)					
Section 1 - 00094	Between roundabout with A3102/ Curzon Street and 40/60mph speed limit change on the approach to Calne Town Centre	306	40	15718	4	0	37.970	29.800	40	40	The assessed speed limit and existing limit are both 40mph. This is the recommended speed limit.
Section 2 - 00083	40/60mph speed limit change on the approach to Calne Town Centre to 60/50mph speed limit change	1975	60	15718	11	2	16.180	48.000	60	50	Although the assessed limit is 60mph, the number of collisions on this section suggest that a reduction in limit would be helpful. A 50mph limit would also reduce the number of changes in speed limit on this route.
Section 3 - 00070	Between 60/50mph speed limit change	732	50	15718	7	2	27.780	37.700	50	50	The assessed speed limit and existing limit are both 50mph. This is the recommended speed limit.

Postal Area: SN11 0 RR to SN15 3RW
USRN: 83800024
OS Grid Ref: 398865 171215 to 393742 172167
Philips Street Atlas: P.79 B5 to F3, P80 A3 to F3
Road Speed Limit: Various

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

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CONSTRUCTION
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MAINTENANCE/CLEANING
(ENTER "NONE" IF APPLICABLE)
USE
(ENTER "NONE" IF APPLICABLE)
DECOMMISSIONING/DEMOLITION
(ENTER "NONE" IF APPLICABLE)

Stat	Purpose of Issue	Date	Auth	Rev	Description	By	Date	Chk'd	Auth
S2	For Information	03/10/22	KNB	1.0	First Issue	FC	03/10/22	AP	KNB

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Project: Speed Limit Reviews 2021 - 2022

Title: A4 Chippenham (Pewsham) to Calne Sheet 1

Sheet Size	Original Scale	Designed/Drawn	Checked	Authorised
A3	N.T.S	FC Date 21/09/22	AP Date 03/10/22	KNB Date 03/10/22

Status	Drawing Number	Rev
S2	5215073 - ATK - DR - 040	1.0

File: 5215073 - ATK - DR - 040 A4 Chippenham to Calne.dwg
Date: Oct 05, 2022 - 5:12pm Plotted by: CHINGSES

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Rev 1.0
Drawing Number 5215073 - ATK - C - DR - 052
Status S2

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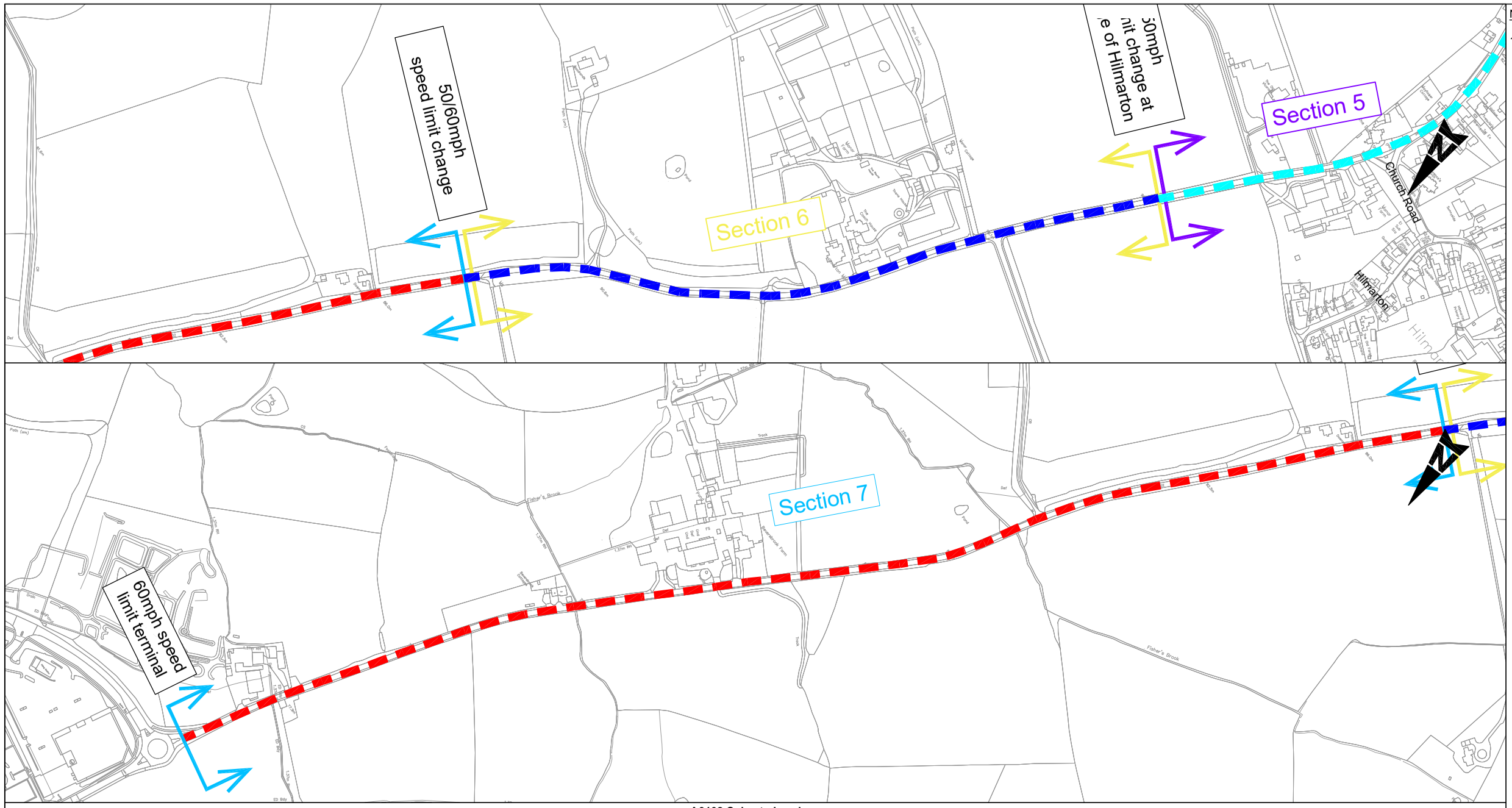

Notes

1. Limits of work are approximate and are to be agreed on site with the Engineer.

A3102 Calne to Lyneham

Road Sections	Description	Section Length (Metres - Taken from AutoCAD OS Tile)	Existing Speed Limit (Miles per Hour)	AADT (Average Annual Daily Traffic - Taken from Traffic Counts)	Collisions		Collision Rate (per 100 million vkm)	Mean Speed (Miles per Hour)	Assessed Speed Limit (Miles per Hour)	Recommended Speed Limit (Miles per Hour)	Comments
					All	KSI (Killed or Seriously Injured) (Fatal or Severe)					
Section 6 - 00023	40/50mph speed limit change at the village of Hilmarton to 50/60mph speed limit change	876	50	8321	4	1	25.060	40.900	50	50	The existing and assessed limits are both 50mph with the mean speed comfortably below that. It is recommended that the speed limit should remain at 50mph.
Section 7 - 00019	50/60mph speed limit change to 60mph speed limit terminal	1660	50	8321	2	0	6.610	51.800	60	50	Although the assessed limit is 60mph, it is recommended that the existing limit is retained as it works well.

Postal Area: SN15 4EE to SN11 9FQ
USRN: 83800009
OS Grid Ref: 402264 178298 to 400590 172876
Philips Street Atlas: P.60 A1 to A2, P.73 E1 to F8, P81 D6 to E8
Road Speed Limit: Various

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION
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CONSTRUCTION
(ENTER 'NONE' IF APPLICABLE)
MAINTENANCE/CLEANING
(ENTER 'NONE' IF APPLICABLE)
USE
(ENTER 'NONE' IF APPLICABLE)
DECOMMISSIONING/DEMOLITION
(ENTER 'NONE' IF APPLICABLE)

Stat	Purpose of Issue	Date	Auth	Rev	Description	By	Date	Chk'd	Auth
S2	For Information	7/10/22	KNB	1.0	First Issue	FC	7/10/22	AP	KNB

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Client: Wiltshire Council

Project: Speed Limit Reviews 2021 - 2022

Title: A3012 Calne to Lyneham
Sheet 3

Sheet Size	Original Scale	Designed/Drawn	Checked	Authorised
A3	N.T.S	FC Date 21/09/22	AP Date 7/10/22	KNB Date 7/10/22

Status	Drawing Number	Rev
S2	5215073 - ATK - C - DR - 052	1.0

File: 5215073 - ATK - DR - 050 A3102 Calne to Lyneham.dwg
Date: Oct 10, 2022 - 10:38am Plotted by: CHN8585

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