



Buckinghamshire County Council

Cublington Traffic Calming Feasibility Study

Feasibility Study Report

LOC18040 / DOC / FEA / 01

06 August 2019

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1 Introduction

1.1 In 2000 Cublington Parish Council (CPC) and BCC collaborated on a proposal for placing a double roundabout in Cublington, the aim of which was to reduce the number of accidents occurring on the junction on Wing Road with Aston Abbots Road and Stewkley Road. The scheme did not proceed but was believed to be feasible. CPC have commissioned Transport for Buckinghamshire (TfB) in 2018 to reassess the feasibility based on current standard and best practices and to produce and updated fee estimate to construct the proposal.

1.2 Following CPC's Local Area Forum (LAF) application, TfB have agreed to produce the following deliverables:

- Obtain and review the original report in relation to current standards, practices and legislation.
- Prepare concept layout drawing based upon current layouts/standard.
- Compile current information in relation to Speed and accident data.
- Allowance for one traffic/speed survey has been made (£380).
- Prepare budget estimate against current rates including all fees, safety audits through to completion.
- Conduct a feasibility stage Road Safety Audit.
- Compile report with the above information.

2 Background

2.1 Introduction

- 2.2 The village of Cublington is located in Buckinghamshire, approximately 6 miles northeast of Aylesbury and 2 miles southwest of Leighton Buzzard. Neighbouring villages include Aston Abbots, Stewkley and Wing. The proposed location of the roundabout is located on the eastern side of the village of Cublington shown in Figure 2.1



Figure 2-1 Wing Road Junction with Aston Abbots Road and Stewkley Road

2.3 Local Objectives

- 2.4 The CPC have identified a number of collisions which occurred and many near misses at the junction above. In addition, traffic volume at the junction has increased significantly since 2000 as Cublington is optimum for cutting across from Milton Keynes to Bicester/Oxford and vice versa. The proposal is expected to reduce the number of collisions at the junction, reduce the average speed and deter rat running across Cublington.
- 2.5 In 2000, CPC and BCC collaborated on a proposal to place a double mini roundabout at the crossroads of Aston Abbots Road and Wing Road in Cublington. This proposal also included the construction of speedbumps on High Street. A feasibility study was undertaken, and the proposals were presented to the parish council. CPC however, have decided not to proceed to construction.
- 2.6 The parish believes that Cublington is used as a ratrun from Milton Keynes to Bicester/Oxford and vice versa. In addition, traffic speeds across the junction have been measured to be excessively high by a VAS located on Wing Road. Given that visibility at the junction is not ideal, CPC believes it is important to reduce traffic volume by making Cublington less attractive as a through route and reduce traffic speed to improve motorist and pedestrian safety.

- 2.7 An initial meeting was held with CPC on the 23rd of January 2019 to discuss the current aims and aspirations of the council. As stated in the PID and the LAF application, the original aim of this scheme was to assess the feasibility of installing a double mini roundabout at the junction. It was decided in the meeting to focus on any suitable traffic calming measures instead. As per the wishes of the parish council, 2 no. of proposals have been presented each with an optional component that vary in cost and effectiveness. This will enable the parish to select a suitable option based on their budget and resident support.

3 Casualty Data

- 3.1 TfB has undertaken a 5-year collision history search for the area around the junction in Cublington. The results of the search have revealed two accidents, one of which is was serious at the junction.
- 3.2 The serious collision occurred on the 19th October 2014 which involved an HGV and a car. As per the police report, the car driver was at fault as they disobeyed the 'Give Way' markings or failed to look properly.
- 3.3 The second collision occurred on the 26th of May 2016 and involved a vehicle and a cyclist. This occurred 80m north of the junction on Stewkley Road. According to the police report, the cause for this accident was aggressive driving. Due to the location, It is unlikely that the current state of the junction contributed to the accident.
- 3.4 As part of the LAF application, CPC have informed TfB of a serious collision which occurred on the 24th September 2017. This was a severe accident which required the attendance of the police and ambulance.
- 3.5 In April 2019, CPC have informed TfB of a serious accident which occurred on the 15th of April 2019 at the junction between Wing Road and Stewkley Road. As per the information provided by CPC, it is believed the collision was caused by a car travelling south Stewkley Road failed to stop at the give way line. Police, ambulance and fire brigade services were all in attendance.

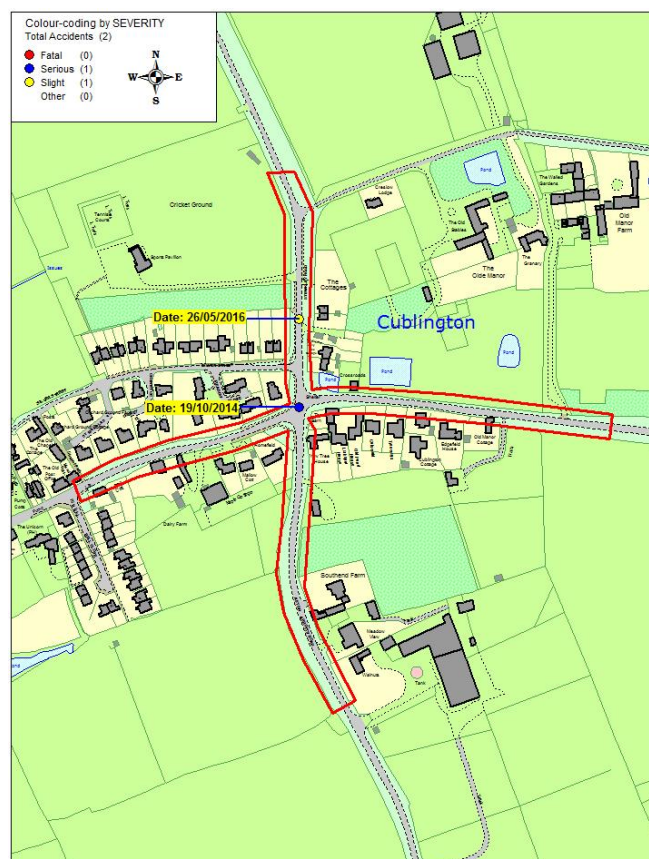


Figure 3-1 Collision data location

4 Traffic volume and Speed Data

4.1 Traffic volume data

- 4.1.1 A full traffic survey was conducted on the week commencing 25/02/2019 using an automatic traffic counter (ATC) installed at Wing Road, approximately 80m east of the junction with Stewkley Road, below is the exact location of the survey, this report has analysed the data obtained from the survey. The speed and traffic volume data has been analysed below in order to understand the risk locals are currently subjected to.



Figure 4-1 Location of traffic volume and speed data survey

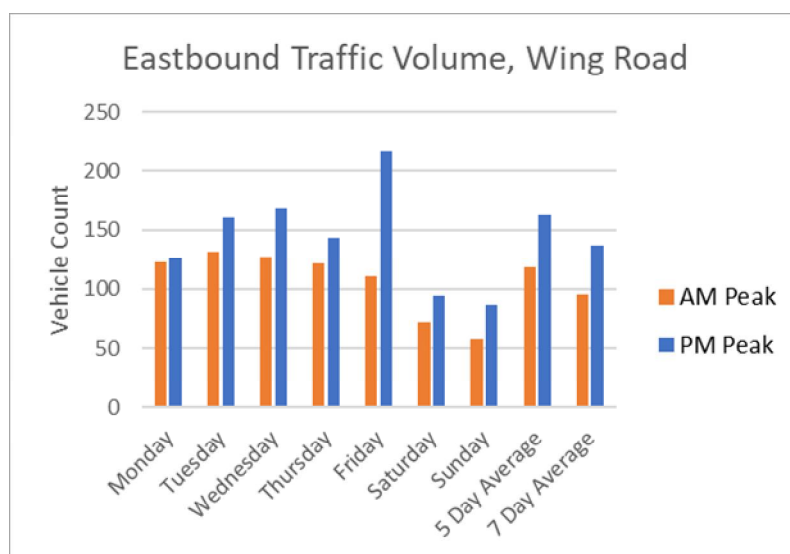


Figure 4-2 Eastbound traffic flows on Wing Road

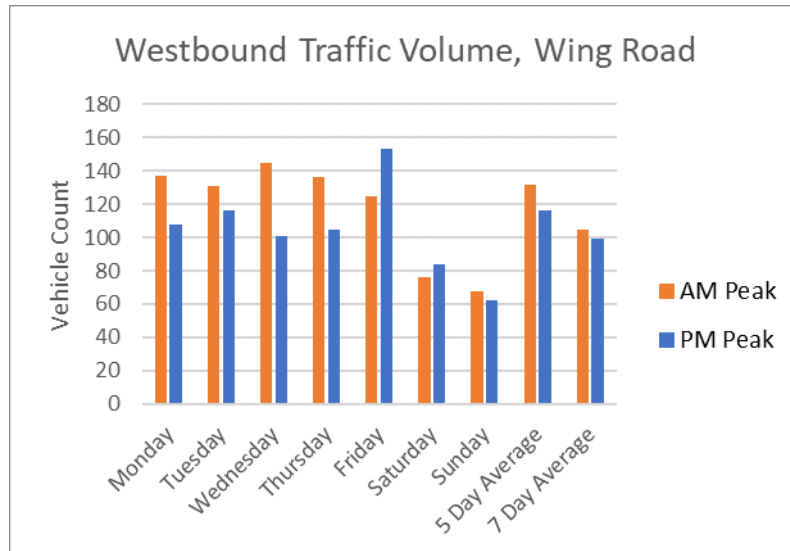


Figure 4-3 Westbound traffic flows on Wing Road

- 4.1.1 Figure 4-2 shows the AM and PM peak eastbound traffic volume on Wing Road. As expected, weekday traffic volumes are higher (130 veh/hr) than weekend traffic volumes (70veh/hr). Similarly, figure 4-3 shows westbound peak traffic volumes. Overall, the peak traffic volume is slightly lower in the westbound direction (Approx. 120 veh/hr weekday, 65 veh/hr weekend). Traffic volumes going in the opposite direction are quite balanced. This indicates that a priority working system could be an effective traffic calming measure.

4.2 Speed Data

- 4.2.1 Using the ATC installed on Wing Road in 2018, the 85th percentile speeds were established. This is used as a design speed to establish the stopping sight distance which in turn informs the desirable visibility requirements at the location of any proposed traffic calming. In addition to this, the average mean speeds are also calculated. The location of the ATC was chosen carefully to capture the speed of westbound vehicles as they approach the junction with Aston Abbots Road. This data is compared to an older speed survey conducted in 2008 at the same location to highlight the changes over the 10-year period. Table 4-C shows the speed on Wing Road.

Table 4-C – Comparison of speed for 2019 and 2008

Traffic speed	February 2019		March 2008	
	Westbound	Eastbound	Westbound	Eastbound
5-day mean speed	30 mph	34 mph	35 mph	39 mph
5-day 85th percentile speed	34 mph	40 mph	41 mph	45 mph
7-day mean speed	29 mph	34 mph	35 mph	38 mph
7-day 85th percentile speed	34 mph	39 mph	40 mph	45mph

- 4.2.2 As shown in Table 4-C, speeds generally exceed the 30mph speed limit in both directions. CPC have particularly expressed their concern with the speed of westbound vehicles as they approach the junction with Aston Abbots Road as visibility is poor. In addition to this, a nursery is located between the speed limit terminal and the main junction. The footpath on Wing Road is narrow and terminates at the nursery. This means pedestrians who need to access the residential properties east of the nursery must use the carriageway. In 2008, the 7-day 85th percentile and mean speed of westbound vehicles was 40 and 35 mph respectively. This has reduced significantly to 34 and 29 mph in 2019.
- 4.2.3 Eastbound speeds are consistently higher than westbound speeds at the given location as shown in Figure 4-4. The 7-day 85th percentile speed exceeds the speed limit by 15mph while the mean speed exceeds the limit by 8mph. This shows that eastbound vehicles speed up as they pass the junction with Aston Abbots Road and approach the national speed limit terminal. Visibility between the junction and the national speed limit terminal is unobstructed.

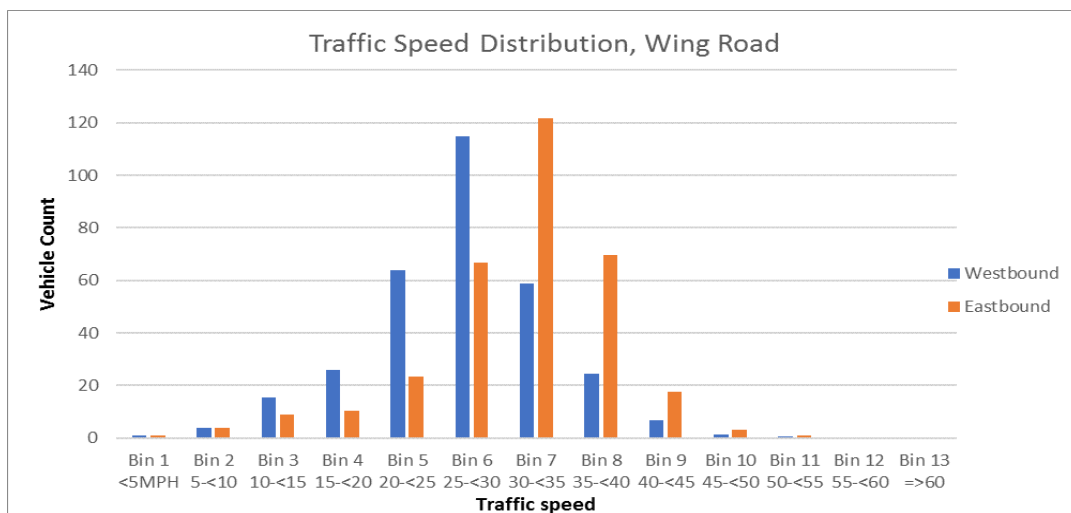


Figure 4-4 Traffic speed distribution on Wing Road

5 Site visit

- 5.1 A site visit was undertaken on the 23rd of January 2019 to assess the site, take measurements and identify possible constraints. It was also undertaken to record existing traffic calming measures on site.
- 5.2 An extensive amount of traffic calming measures have been installed on Wing Road to tackle the speeding problem in the past. This includes a vehicle activated sign (VAS) which displays 'SLOW DOWN' and '30' mph roundel when it detects vehicles travelling above 30mph, dragons' teeth, gateway features 'SLOW' markings warning signage and speed limit roundels. Despite these efforts, the village still suffers from speeding vehicles. Due to the amount of traffic calming features already installed and site constraints, a limited amount of traffic calming features are expected to be feasible.
- 5.3 Visibility at the junction is poor, especially between Aston Abbots Road and Wing Road. During the site visit, it was noted that visibility between High Street and Stewkley Road could be improved with some vegetation clearance.
- 5.4 There is no footway located on the northern side of Wing Road. The footway along the southern side is narrow and terminates at Cublington Nursery. Several residential properties are located beyond the termination point. The parish council have informed TfB that a disabled resident uses the carriageway to get onto the footway.
- 5.5 Whilst on site, TfB took measurements which will be needed when considering the different options discussed within this report. Measurements required include carriageway widths and footway widths. The details can be found below:

Table 5-A Cublington crossroads highway geometry

Road name	Footway/Carriageway	Width (m)
High Street	Carriageway	5.8
Wing Road	Carriageway	5.9
Wing Road	Footway – Corner with Aston Abbots Road	1.2
Aston Abbots Road	Carriageway	6.5
Stewkley Road	Footway – Corner with High Street	1.2

6 Review and Development of Options

- 6.1 The primary principle of traffic calming is to engage with drivers so that they reduce their speed and drive more safely and with more consideration for pedestrians and other road users. The techniques used across much of the country involves formal speed restrictions indicated by appropriate traffic signs and backed up with physical changes to the road surface such as road humps or kerbed islands. Sometimes, there are changes to the alignment or width of a road, in which case additional traffic signs are put in place to explain the new road layout to drivers.
- 6.2 This approach often achieves the desired effect of reducing vehicular speeds but has the disadvantage of adding to street clutter and reducing the aesthetic quality of an area. In a conservation area such as Cublington, this approach can damage the unique quality of a place that local people and visitors feel is important. As per Aylesbury Vale District (AVDC) conservation area management plan, the use of bright colours used for road surfacing and traffic calming is prohibited within a conservation area. Instead, it is recommended to use muted colours such as buff or a contrasting grey colour. Red coloured surfacing has been used in the traffic calming measures discussed below, however, these features are located outside the conservation area boundary.
- 6.3 The parish council have asked TfB to focus on traffic calming features exclusively on Wing Road. As noted in Table 4C, eastbound speeds are significantly higher than westbound speeds. Although these figures were measured on Wing Road, one can infer that eastbound speeds are also above the speed limit on the approach to the main junction. To reduce speeds and the number of accidents at the crossroads, TfB recommends traffic calming features to be installed on High Street. As such, each option has an optional element which includes traffic calming features on High Street. This allows CPC the liberty to choose if they want any traffic calming features to be installed on High Street.
- 6.4 The following options have been reviewed or developed and in accordance with the following standards and best-practice guidance:
- Design Manual for Roads and Bridges (DMRB)¹
 - Traffic Signs Manual (TSM)²
 - Local Transport Notes (LTN)³
 - Traffic Advisory Leaflets (TAL)⁴

¹ Design Manual for Roads and Bridges Volume 6 Section 3 Part 5 TA 87/04

² Traffic Sign Manual Chapter 3 and 5

³ Local Transport Note Traffic Calming 1/07

⁴ Traffic Advisory Leaflets 07/93 Traffic calming regulations
Traffic Advisory Leaflets 12/93 Overrun areas
Traffic Advisory Leaflets 13/93 Gateways
Traffic Advisory Leaflets 09/94 Horizontal deflections

- 6.5 High-level cost estimates have been produced for all options using the 2019 schedule of rates for TfB approved subcontractors. Where these schedules of rates did not cover a specific item, an estimated rate has been applied based on similar schemes. Refer to table 10-A for a summary of cost estimates.
- 6.6 It is assumed that no major utility diversions are required for any of the below options. An underground utility search will need to be conducted to confirm the locations of utilities in the detailed design stage.

7 Option 1a/1b – Signs and lines, vegetation clearance

7.1 Overview

- 7.1.1 Option 1a/1b is a low-cost option which focusses on simple yet effective solutions to reduce traffic speed at the Cublington crossroads. TfB have incorporated signs and lines improvements to slow traffic down and improve safety at the crossroads. Red or buff backing to some road markings are proposed to highlight and increase their effect on road users. Vegetation clearance is proposed to improve visibility at junctions.

7.2 Traffic calming techniques

- 7.2.1 Road markings and traffic signs are the most common method of communicating information to the motorist. There are various road markings and signs that can be installed on the public highway, many of these have subtle traffic calming implications. Some of the most common road markings used in village environments are 'SLOW' markings, speed roundels and 'dragons teeth'.
- 7.2.2 Coloured and textured surfacing are usually used in combination with other traffic calming measures such as traffic signs and roundels, by increasing the overall visual impact. While coloured surfacing only elevates the visual impact, textured surfacing also creates an audible rumble sound to alert the driver. Coloured and textured surfacing are prone to fading and have a considerably higher maintenance cost when compared to road markings. They are unlikely to have a measurable effect if used on their own.

7.3 Option 1a

- 7.3.1 For Option 1a, traffic calming features are limited to Wing Road. Carriageway edge markings are used along Wing Road from the speed limit change to the main junction. This will have the effect of making the already narrow carriageway look even narrower, encouraging drivers in both directions to slow down. The existing road markings at the speed limit change and the slow marking located near Cublington Nursery are proposed to be re-laid with buff backing. This will reinforce the message of these road markings. Sub-plate diag. 511 which spells out 'REDUCE SPEED NOW' is proposed to be added to the traffic sign pole located near Cublington Nursery. Refer to Appendix A for option 1a general arrangement drawing.

7.4 Option 1b

- 7.4.1 Option 1b carries forward traffic calming features described above and adds signs and lines improvements to High Street. It is also proposed to install carriageway edge markings along High Street from Bell Cott to the main junction. To improve visibility, vegetation is proposed to be trimmed back to the highway boundary along Wing Road where possible. It is recommended to duplicate the double bend and junction warning signs along with the proposed 'Reduce speed now' sub plate on Wing Road. The proposed location for these signs is on the verge opposite Mallow Cottage. Refer to Appendix A for option 1b general arrangement drawing.

Table 7-A Option 1a/b summary table

Option Title	Works only cost estimate	
Option 1a	£7,500	
Option 1b	£11,600	
Key Constraints	Key Risks	Key Benefits
<p>Low cost option</p> <p>Narrow carriageway width of 5.9m (min).</p> <p>Rumble devices cannot be used near residential areas.</p> <p>Use of too many signs and lines may have a detrimental effect on other traffic calming measures.</p>	<p>Additional signs and lines slightly increase maintenance cost and may diminish the rural feel of the area.</p>	<p>Improvement in road user and pedestrian safety.</p> <p>Very cost effective.</p> <p>Quick installation.</p>

8 Option 2a/b Signs and lines, vegetation clearance, priority buildout

8.1 Overview

- 8.1.1 Option 2a/b investigates the feasibility of creating a buildout with a priority working system on Wing Road to reduce the speed of vehicles approaching the crossroads. In addition, the traffic calming features proposed in option 1a/b are taken forward. As above, the proposals for option 2a are limited to Wing Road while option 2b includes additional traffic calming measures on High Street.

8.2 Traffic calming techniques

- 8.2.1 A buildout is a kerb extension which leaves a narrow gap for cars to navigate. This width is sufficient for a HGV pass through the gap as it maintains usual lane width. An overrun area may be included to ensure that wide vehicles such as combine harvesters are able to navigate through the narrowing. As shown in chapter 4, the flows on Wing Road are relatively balanced over both AM and PM peaks. This means that a buildout with a priority working system is a suitable traffic calming measure for this location.
- 8.2.2 The priority system has been orientated such that eastbound vehicles have priority. This ensures that westbound vehicles speeds have slowed down sufficiently as they approach the junction with Aston Abbots Road.
- 8.2.3 As per Buckinghamshire County Council policy, all proposed narrowing must be illuminated, and as such, all proposed kerb extensions are located next to existing lighting columns. To improve visibility further, two reflective 'keep left' bollards are included in this proposal.
- 8.2.4 Figure 8-1 shows a priority buildout system with an over-runnable area based in Nettleden, Hertfordshire. Here the over-runnable area is made of granite setts. This is to discourage narrow vehicles from using this area. The overrunnable area can also be constructed of StreetPrint surface.



Figure 8-1 Priority buildout with over runnable area

8.3 Option 2a

- 8.3.1 This option proposes buildout with a priority working system to be constructed on Wing Road 100m east of the crossroads. The size of this buildout has been carefully designed to have a positive effect on traffic speed while allowing large farm vehicles to navigate through the gap. Due to the narrow nature of Wing Road, it is proposed to construct a relatively small buildout (0.6m) with a wider overrunable area (2m). This overrunable area shall be constructed of a textured surface with a contrasting colour to deter smaller vehicles from driving over this area. It should be noted that due to the narrow width of the buildout, it is expected that the speed reduction achieved will be lower than a conventional buildout with no overrunable area. It is proposed that parking restrictions are imposed near the buildout to reduce the amount of time westbound drivers are on the wrong side of the road. Additional signage is installed 115m east of the speed limit terminal to warn drivers of the giveaway line and road narrowing ahead. Overall, the proposed buildout and overrunable area will occupy a width of 2.6m. Refer to Appendix A for the general arrangement drawing.

8.4 Option 2b

- 8.4.1 Option 2b carries forward the buildout design on Wing Road and adds the same traffic calming elements on High Street described in option 1b. These include:
- Additional signage and a coloured 'SLOW' marking near Mallow Cottage.
 - Edge markings from Bell Cottage to the crossroads.
 - Vegetation clearance.
- 8.4.2 Refer to Appendix A for the general arrangement drawing.

Table 8-A Option 3 summary table

Option Title		Works only cost estimate	
Option 2a		£29,600	
Option 2b		£33,100	
Key Constraints		Key Risks	Key Benefits
<p>Narrow carriageway width of 5.9m</p> <p>Rumble devices cannot be used near residential areas.</p> <p>Narrow verge widths limit the possible locations for signs.</p> <p>Use of too many signs and lines may have a detrimental effect on other traffic calming measures.</p> <p>Construction of physical traffic calming measures cost significantly more than road markings and signage improvements.</p>		<p>Additional signs and lines slightly increase maintenance cost and may diminish the rural feel of the area.</p> <p>Vegetation must be cleared regularly, increasing maintenance costs.</p> <p>Low reduction in speed possible when compared to conventional buildouts due to narrow width of the buildout (0.6m).</p>	<p>Improvement in road user and pedestrian safety.</p> <p>Significant reduction in speed, especially for westbound vehicles at the approach to the crossroads.</p>

9 Conclusion and Recommendations

- 9.1 TfB have prepared three traffic calming options for Wing Road, Cublington. These options vary in cost as per the wishes of the Parish Council. Two proposals are presented to the parish council each with an optional :
- 9.2 Option 1a/b. This option focuses on a simple solution which is low in cost. This includes signs and lines improvements and vegetation clearance.
- 9.3 As most non-intrusive traffic calming measures have been exhausted, Option 2a/b recommends a buildout with a priority working system to be constructed on Wing Road. This option also retains proposals from option 1a/b
- 9.4 All above options are expected to improve the pedestrian and vehicle user's safety with varying degree of effectiveness and cost. The CPC and residents should decide which option (if any) to proceed with to detailed design.
- 9.5 It is recommended with traffic calming that an incremental approach is adopted. The options proposed have been designed to support this method. The option 2a/b includes all proposals from option 1a/b. By selecting this approach, the parish council can implement the low-cost option first. If this option does not have the desired effect, they can decide to implement the medium or high cost option. Generally, this approach would not result in abortive costs.
- 9.6 Along with traffic calming proposals, TfB have prepared high level cost estimates using the 2018 schedule of rates for TfB approved subcontractors. Where these schedules of rates did not cover a specific item, an estimated rate has been applied based on similar schemes. Estimated costs have been presented along with each proposal. Refer to table 10-A.
- 9.7 It is important to note that the implementation of some proposed traffic calming measures are weather dependent. The installation of road markings can only be completed in dry weather which means that it is often difficult to carry out during the winter months.
- 9.8 To conclude, TfB recommend progressing the scheme further by developing the proposed drawings located in Appendix A to detailed design and implementation. Once the proposals have been reviewed by the Parish Council they can then contact TfB with any decisions, whether it be taking the scheme to detail design or any further queries related to the scheme.

10 Cost Estimates

Table 10-A Summary of Budget Cost Estimates

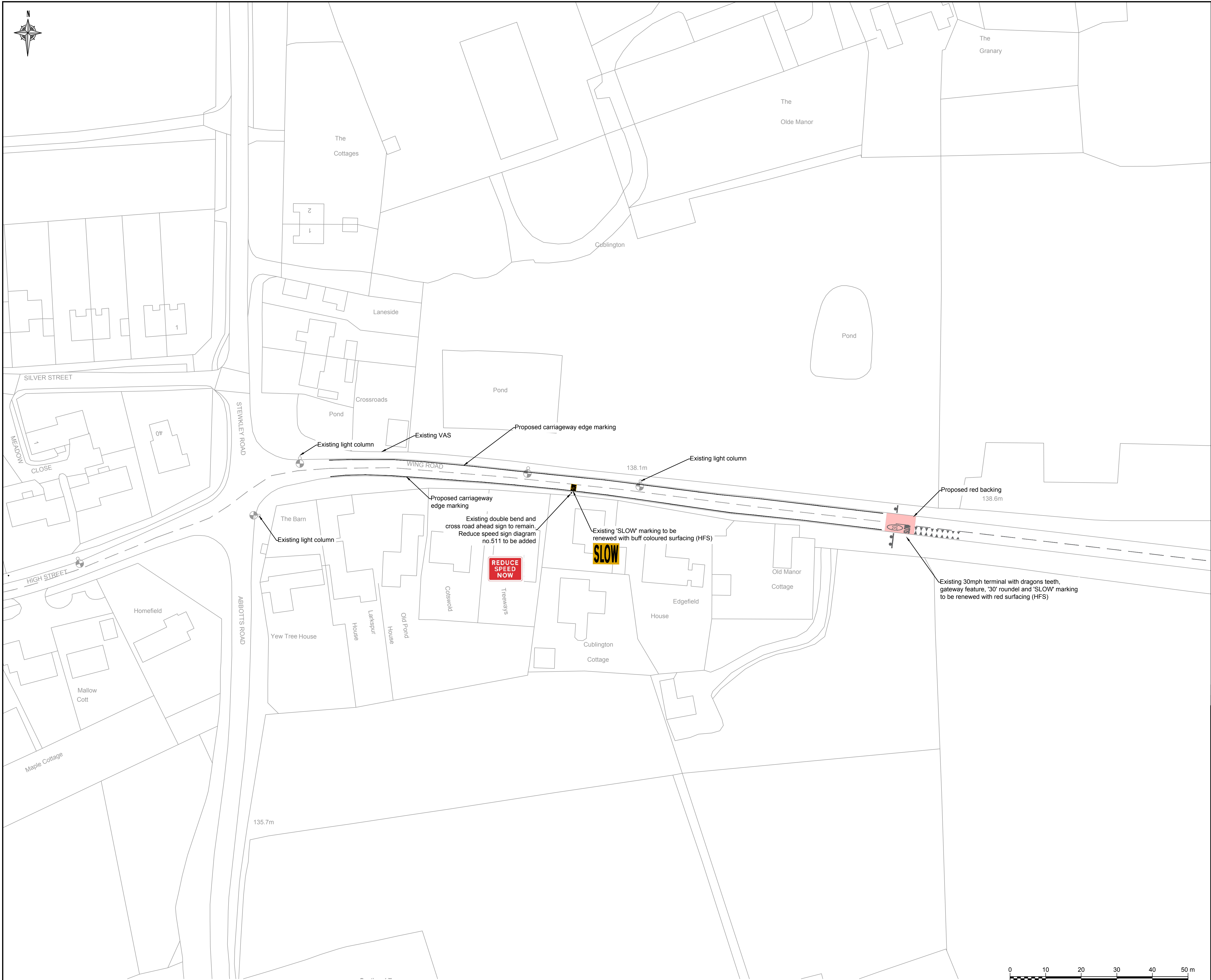
Option		Cost estimate
1a	Option 1a <ul style="list-style-type: none"> ○ <i>Edge markings</i> ○ <i>Signage</i> ○ <i>Coloured surfacing</i> ○ <i>Detailed design and obtaining quotations from TfB Supply Chain Partners</i> ○ <i>Supervision</i> 	£7,500
1b	Option 1b <ul style="list-style-type: none"> ○ <i>Edge markings</i> ○ <i>Signage</i> ○ <i>Vegetation clearance</i> ○ <i>Coloured surfacing at speed terminal</i> ○ <i>Detailed design and obtaining quotations from TfB Supply Chain Partners</i> ○ <i>Supervision</i> 	£11,600
2a	Option 2a <ul style="list-style-type: none"> ○ <i>Buildout with priority working system including associated signage and lining</i> ○ <i>Edge markings</i> ○ <i>Signage</i> ○ <i>Vegetation clearance</i> ○ <i>Coloured surfacing at speed terminal</i> ○ <i>Detailed design and obtaining quotations from TfB Supply Chain Partners</i> ○ <i>Supervision</i> ○ <i>Consultation</i> 	£30,600
2b	Option 2b <ul style="list-style-type: none"> ○ <i>Buildout with priority working system including associated signage and lining</i> ○ <i>Edge markings</i> ○ <i>Signage</i> ○ <i>Coloured surfacing at speed terminal</i> ○ <i>Detailed design and obtaining quotations from TfB Supply Chain Partners</i> ○ <i>Supervision</i> ○ <i>Consultation</i> 	£34,000

- 10.1 All budget cost estimates within this report are initial budget estimates based upon recent Transport for Buckinghamshire experience and recent similar schemes. All costs will include a value for fees associated with the design, procurement, supervision and progression of a scheme. This will vary depending on a scheme complexity. Costs also include consultation as required.
- 10.2 Prior to quotations for works being undertaken, TfB would normally be commissioned to complete the detailed design and obtain quotes from TfB Supply Chain Partners. On completion of this stage, TfB would issue a quote for the implementation of the works.
- 10.3 The cost estimate has been based upon work being undertaken in 2018-19. For future years, a rate of inflation may need to be applied.

- 10.4 A percentage contingency of has been applied to all costs within the budget estimate. This is representative of a feasibility stage budget estimate and reflects the nature of many of the unknown features that will/may be identified through further detailed design and implementation. Contingency would reduce following the detailed design as the risks are identified and resolved.
- 10.5 As the scheme progresses, this contingency would reduce as costs are more accurately defined. If the scheme were to be commissioned, TfB reserve the right to review the detailed design and construction costs.
- 10.6 All works costs include an allowance for appropriate traffic management to ensure the works are undertaken in a safe manner.
- 10.7 Where necessary, the estimates allow for a single consultation exercise (option 2a and option 2b). In the case of statutory consultations an informal consultation exercise is recommended prior to the costlier statutory stage. Therefore, it is recommended that the parish undertake a degree of informal consultation (supported by TfB) to identify any risks that could be mitigated prior to the statutory process.

APPENDIX A Drawings

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Notes:

1. Do not scale from this drawing

Legend:

--- Existing road markings

--- Proposed road markings

P01	APRIL 2019	FIRST ISSUE	AA	KA	KA	PS
Rev	Rev. Date	Purpose of revision	Drawn	Checked	Rev'd	Appr'd

Country Hall,
Walton Street,
Aylesbury,
Buckinghamshire,
HP20 1UY

Client

Cublington Parish Council

Project

CUBLINGTON TRAFFIC CALMING
FEASIBILITY STUDY

Drawing title

CUBLINGTON
TRAFFIC CALMING
FEASIBILITY STUDY
OPTION 1A

Drawing status

Feasibility

Scale

NTS

DO NOT SCALE

Project No.

LOC18040

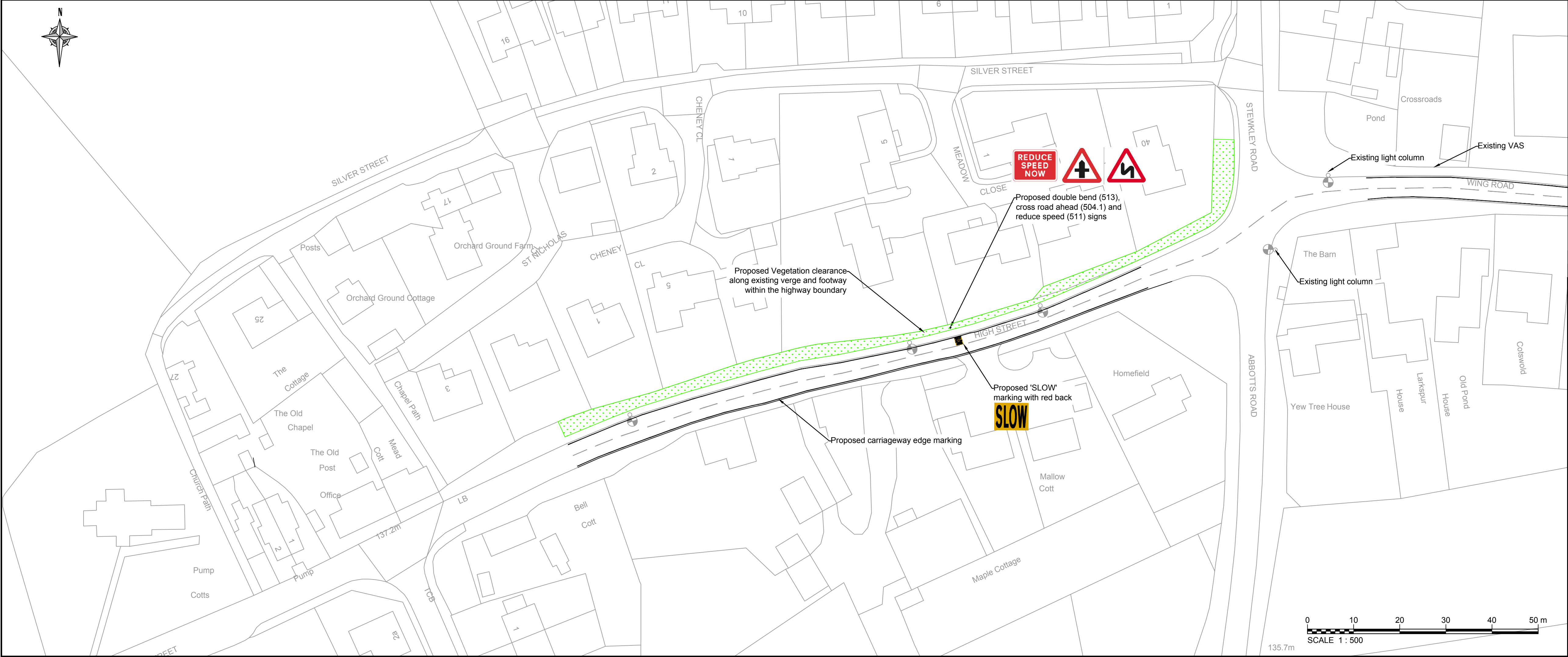
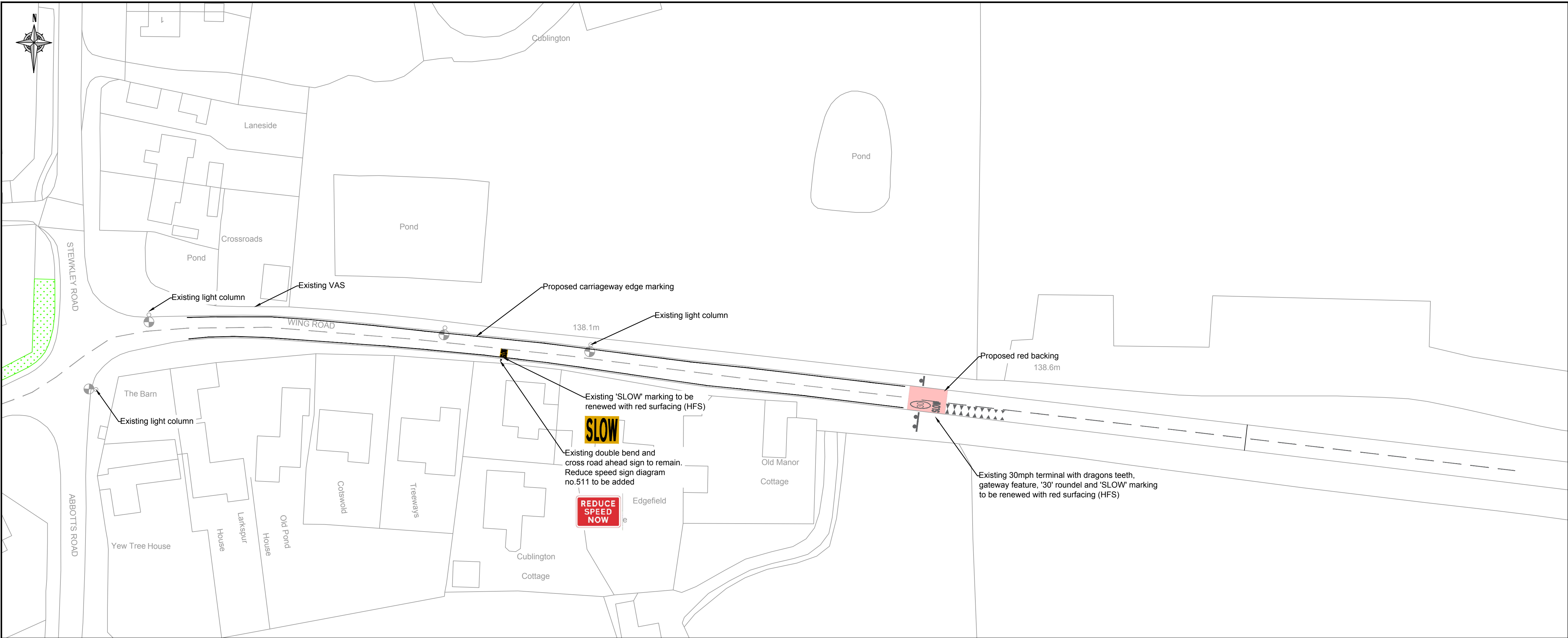
Rev

P01

Drawing number

LOC18040-DWG-001-OPTION-1A

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Notes:

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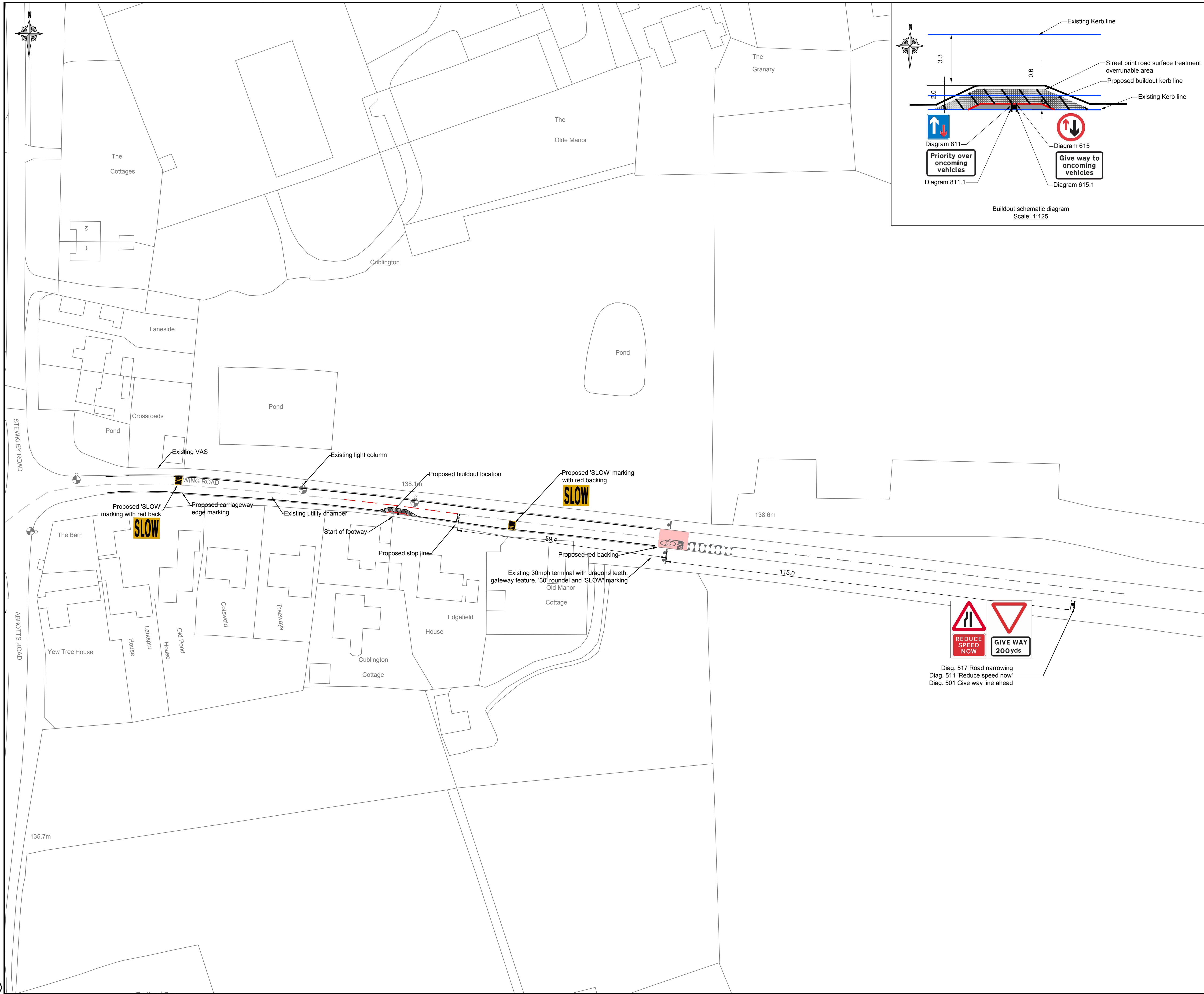
Legend:

--- Existing road markings

--- Proposed road markings

P01	APRIL 2019	FIRST ISSUE	AA	KA	KA	PS
Rev	Rev. Date	Purpose of revision	Drawn	Checked	Rev'd	Apprv'd
Transport for Buckinghamshire			County Hall, Walton Street, Aylesbury, Buckinghamshire, HP20 1UY			
Client Cublington Parish Council						
Project CUBLINGTON TRAFFIC CALMING FEASIBILITY STUDY						
Drawing title CUBLINGTON TRAFFIC CALMING FEASIBILITY STUDY OPTION 1B						
Drawing status Feasibility						
Scale NTS		DO NOT SCALE				
Project No. LOC18040		Rev P01				
Drawing number LOC18040-DWG-001-OPTION-1B						
This drawing is not to be used in whole or part other than for the intended purpose and project as defined on this drawing.						

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Notes:

1. Do not scale from this drawing

Legend:

Existing road markings
Proposed road markings
Proposed removal of road markings
Existing street light column

P01	APRIL 2019	FIRST ISSUE	MA	KA	KA	PS
Rev	Rev. Date	Purpose of revision	Drawn	Checked	Rev'd	Appr'd

Transport for Buckinghamshire

Country Hall,
Walton Street,
Aylesbury,
Buckinghamshire,
HP20 1UY

Client
Cublington Parish Council

Project
CUBLINGTON TRAFFIC CALMING
FEASIBILITY STUDY

Drawing title
CUBLINGTON
TRAFFIC CALMING
FEASIBILITY STUDY
OPTION 2A

Drawing status
Feasibility

Scale	NTS	DO NOT SCALE
Project No.	LOC18040	Rev P01

Drawing number
LOC18040-DWG-001-OPTION-2A

This drawing is not to be used in whole or part other than for the intended purpose and project as defined on this drawing.

APPENDIX B Traffic, speed and collision data

Cublington vehicle classification



Site: Wing Road, Cublington

Period: Monday 25th February - Sunday 3rd March 2019


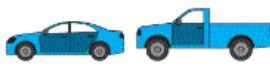












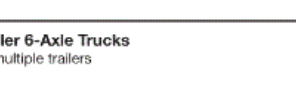




Notes:

Contact: Simon Vale t.svale@bucksc.gov.uk
Details: Asset Team
Transport for Buckinghamshire
Floor 10
New County Offices
Walton Street
Aylesbury
Buckinghamshire
HP20 1UY
DL: 01296 387447
M: 07977 167112

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Follow us on Twitter @TfB alerts



FHWA Vehicle Classifications

1. Motorcycles 2 axles, 2 or 3 tires 	2. Passenger Cars 2 axles, can have 1- or 2-axle trailers 	3. Pickups, Panels, Vans 2 axles, 4-tire single units Can have 1 or 2 axle trailers 	4. Buses 2 or 3 axles, full length 
5. Single Unit 2-Axle Trucks 2 axles, 6 tires (dual rear tires), single-unit 	6. Single Unit 3-Axle Trucks 3 axles, single unit 	7. Single Unit 4 or More-Axle Trucks 4 or more axles, single unit 	8. Single Trailer 3- or 4-Axle Trucks 3 or 4 axles, single trailer 
9. Single Trailer 5-Axle Trucks 5 axles, single trailer  	10. Single Trailer 6 or More-Axle Trucks 6 or more axles, single trailer  	  	
11. Multi-Trailer 5 or Less-Axle Trucks 5 or less axles, multiple trailers 	12. Multi-Trailer 6-Axle Trucks 6 axles, multiple trailers  		
13. Multi-Trailer 7 or More-Axle Trucks 7 or more axles, multiple trailers 			

Site No. 84202227 Site Ref. 84202227
Wing Road, Cublington opposite community centre
Classification Summary (Mon-Fri)-FHWA 13

From 25/02/2019 To 04/03/2019

Lat/Lng. 51.89262 -0.77724

Channel: Westbound

	Total Volume	Bin 1 Mb	Bin 2 Cr/Cr+Tr	Bin 3 Van	Bin 4 Bus	Bin 5 2AxSng	Bin 6 3AxSng	Bin 7 4AxSng	Bin 8 ≤=4AxDbt	Bin 9 5AxDbt	Bin 10 ≥=6AxDbt	Bin 11 5AxMulti	Bin 12 6AxMulti	Bin 13 ≥=7AxMul
00:00	4	0	3	1	0	0	0	0	0	0	0	0	0	0
01:00	1	0	1	1	0	0	0	0	0	0	0	0	0	0
02:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	2	0	1	0	0	0	0	0	0	0	0	0	0	0
05:00	25	0	16	7	0	2	0	0	0	0	0	0	0	0
06:00	90	0	55	31	0	4	0	0	0	0	0	0	0	0
07:00	123	1	89	28	1	4	1	0	0	0	0	0	0	0
08:00	132	1	93	31	1	5	0	0	0	0	0	0	0	0
09:00	97	0	64	24	2	5	1	0	0	0	0	0	0	0
10:00	59	2	41	10	2	3	0	0	0	0	0	0	0	0
11:00	57	1	39	13	1	2	0	0	0	0	0	0	0	0
12:00	62	1	44	14	0	2	1	0	0	0	0	0	0	0
13:00	62	1	45	11	2	2	0	0	0	0	0	0	0	0
14:00	61	1	44	12	0	3	1	0	0	0	0	0	0	0
15:00	93	1	68	18	2	3	0	0	0	0	0	0	0	0
16:00	101	1	75	21	0	2	1	0	0	0	0	0	0	0
17:00	116	0	90	19	2	4	1	0	0	0	0	0	0	0
18:00	90	0	73	15	0	2	0	0	0	0	0	0	0	0
19:00	51	0	42	9	0	0	0	0	0	0	0	0	0	0
20:00	28	0	25	4	0	0	0	0	0	0	0	0	0	0
21:00	20	0	19	1	0	0	0	0	0	0	0	0	0	0
22:00	16	0	14	1	0	0	0	0	0	0	0	0	0	0
23:00	10	0	9	1	0	0	0	0	0	0	0	0	0	0
Total														
12H(7-19)	1053	10	766	217	14	36	6	2	1	1	1	0	0	0
16H(6-22)	1243	10	906	262	14	40	6	2	1	1	1	0	0	0
18H(6-24)	1269	10	929	265	14	40	6	2	1	1	1	0	0	0
24H(0-24)	1302	10	951	274	14	43	6	2	1	1	1	0	0	0
AM Peak	08:00 132	10:00 2	08:00 93	06:00 31	09:00 2	09:00 5	09:00 1	10:00 0	11:00 0	08:00 0	07:00 0	11:00 0	11:00 0	11:00 0
PM Peak	17:00 116	16:00 1	17:00 90	16:00 21	13:00 2	17:00 4	16:00 1	22:00 0	12:00 0	15:00 0	13:00 0	23:00 0	23:00 0	23:00 0

Site No. 84202227 Site Ref. 84202227
 Wing Road, Cublington opposite community centre
 Classification Summary (Mon-Fri)-FHWA 13

From 25/02/2019 To 04/03/2019

Lat/Lng. 51.89262 -0.77724

Channel: Eastbound

	Total Volume	Bin 1 Mb	Bin 2 Cr/Cr+Tr	Bin 3 Van	Bin 4 Bus	Bin 5 2AxSng	Bin 6 3AxSng	Bin 7 4AxSng	Bin 8 ≤4AxDbf	Bin 9 5AxDbf	Bin 10 ≥6AxDbf	Bin 11 5AxMulti	Bin 12 6AxMulti	Bin 13 ≥7AxMul
00:00	1	0	0	1	0	0	0	0	0	0	0	0	0	0
01:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0
04:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0
05:00	15	0	12	3	0	0	0	0	0	0	0	0	0	0
06:00	44	0	34	9	0	1	0	0	0	0	0	0	0	0
07:00	116	0	93	18	0	4	1	0	0	0	0	0	0	0
08:00	118	0	90	21	1	5	0	0	0	0	0	0	0	0
09:00	85	0	56	23	1	4	0	1	0	0	0	0	0	0
10:00	55	0	39	12	1	3	0	0	0	0	0	0	0	0
11:00	61	2	39	15	2	3	1	0	0	0	0	0	0	0
12:00	64	0	46	15	0	4	0	0	0	0	0	0	0	0
13:00	72	1	48	18	1	3	0	1	0	0	0	0	0	0
14:00	81	1	57	18	1	3	0	0	0	0	0	0	0	0
15:00	103	1	75	20	1	4	0	0	0	0	0	0	0	0
16:00	152	1	112	34	1	3	0	1	0	0	0	0	0	0
17:00	163	1	130	30	0	2	0	0	0	0	0	0	0	0
18:00	102	0	86	15	0	1	0	0	0	0	0	0	0	0
19:00	49	0	42	7	0	0	0	0	0	0	0	0	0	0
20:00	25	0	22	3	0	0	0	0	0	0	0	0	0	0
21:00	18	0	15	2	0	0	0	0	0	0	0	0	0	0
22:00	15	0	14	1	0	0	0	0	0	0	0	0	0	0
23:00	5	0	5	1	0	0	0	0	0	0	0	0	0	0
Total														
12H(7-19)	1172	8	870	238	11	37	3	3	1	0	0	0	0	0
16H(6-22)	1308	9	984	259	11	38	3	3	1	0	0	0	0	0
18H(6-24)	1328	9	1002	260	11	39	3	4	1	0	0	0	0	0
24H(0-24)	1351	9	1020	265	11	39	3	4	1	0	0	0	0	0
AM Peak	08:00 118	11:00 2	07:00 93	09:00 23	11:00 2	08:00 5	07:00 1	09:00 1	09:00 0	11:00 0	11:00 0	11:00 0	11:00 0	11:00 0
PM Peak	17:00 163	15:00 1	17:00 130	16:00 34	15:00 1	15:00 4	15:00 0	16:00 1	16:00 0	15:00 0	23:00 0	23:00 0	23:00 0	23:00 0

Site No. 84202227 Site Ref. 84202227

Lat/Lng. 51.89262 -0.77724

Wing Road, Cublington opposite community centre

Classification Summary (Mon-Fri)-FHWA 13

From 25/02/2019 To 04/03/2019

Channel: Not Assigned

	Total Volume	Bin 1 Mb	Bin 2 Cr/Cr+Tr	Bin 3 Van	Bin 4 Bus	Bin 5 2AxSng	Bin 6 3AxSng	Bin 7 4AxSng	Bin 8 <=4AxDbf	Bin 9 5AxDbf	Bin 10 >=6AxDbf	Bin 11 5AxMulti	Bin 12 6AxMulti	Bin 13 >=7AxMulti
00:00	5	0	3	2	0	0	0	0	0	0	0	0	0	0
01:00	3	0	1	1	0	0	0	0	0	0	0	0	0	0
02:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0
03:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0
04:00	4	0	3	0	0	0	0	0	0	0	0	0	0	0
05:00	40	0	28	10	0	2	0	0	0	0	0	0	0	0
06:00	134	0	89	40	0	4	0	0	0	0	0	0	0	0
07:00	239	1	182	46	1	7	2	0	0	0	0	0	0	0
08:00	250	2	183	52	2	9	1	1	0	0	0	0	0	0
09:00	182	1	120	47	4	9	1	1	0	0	0	0	0	0
10:00	114	2	80	22	2	6	1	1	0	0	0	0	0	0
11:00	118	3	78	28	3	5	1	0	0	0	0	0	0	0
12:00	127	1	89	29	0	6	1	0	0	0	0	0	0	0
13:00	134	2	93	29	4	5	1	1	0	0	0	0	0	0
14:00	141	2	101	30	2	6	1	0	0	0	0	0	0	0
15:00	195	2	144	39	3	7	0	1	0	1	0	0	0	0
16:00	253	2	188	55	1	5	1	1	0	0	0	0	0	0
17:00	279	1	220	49	2	5	1	0	0	0	0	0	0	0
18:00	192	0	159	30	0	3	0	0	0	0	0	0	0	0
19:00	100	0	84	16	0	0	0	0	0	0	0	0	0	0
20:00	54	0	47	6	0	0	0	0	0	0	0	0	0	0
21:00	38	0	34	4	0	0	0	0	0	0	0	0	0	0
22:00	30	0	28	2	0	0	0	0	0	0	0	0	0	0
23:00	15	0	13	2	0	0	0	0	0	0	0	0	0	0
Total														
12H(7-19)	2225	18	1636	455	25	73	9	5	2	1	1	0	0	0
16H(6-22)	2552	18	1890	521	25	79	9	5	2	1	1	0	0	0
18H(6-24)	2597	18	1931	525	25	79	9	6	2	1	1	0	0	0
24H(0-24)	2653	18	1971	538	25	82	9	6	2	1	1	0	0	0
AM Peak	08:00 250	11:00 3	08:00 183	08:00 52	09:00 4	08:00 9	07:00 2	09:00 1	11:00 0	08:00 0	07:00 0	11:00 0	11:00 0	11:00 0
PM Peak	17:00 279	16:00 2	17:00 220	16:00 55	13:00 4	15:00 7	16:00 1	16:00 1	16:00 0	15:00 1	13:00 0	23:00 0	23:00 0	23:00 0

Cublington traffic volume and speed survey



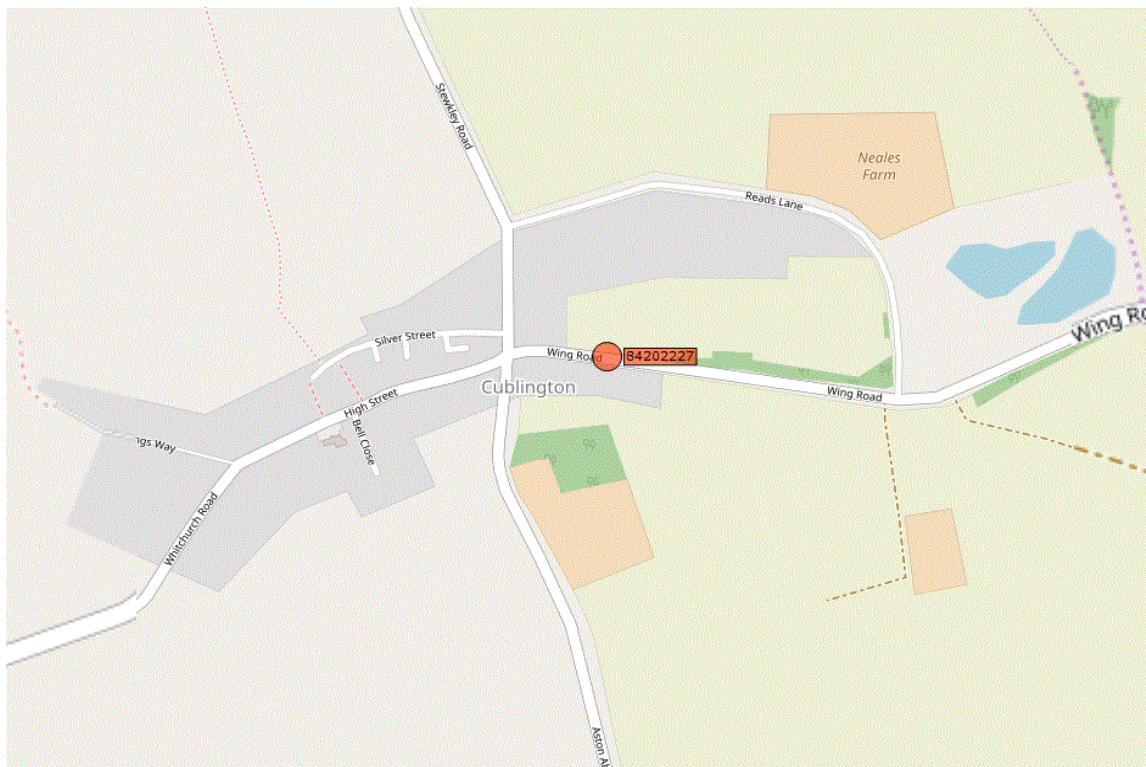
Site: Wing Road, Cublington

Period: Monday 25th February - Sunday 3rd March 2019

Notes:

Contact: Simon Vale t.svale@bucksc.gov.uk
Details: Asset Team
Transport for Buckinghamshire
Floor 10
New County Offices
Walton Street
Aylesbury
Buckinghamshire
HP20 1UY
DL: 01296 387447
M: 07977 167112

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Site No. 84202227 Site Ref. 84202227
Wing Road, Cublington opposite community centre
Speed Summary (Mon-Fri)-Speed Limit 30 Mph

From 25/02/2019 To 04/03/2019

Lat/Lng. 51.89262 -0.77724

Channel: Westbound

	Total Volume	85th %ile	Mean Ave.	Std. Dev.	Bin 1 <5MPH	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<25	Bin 6 25<30	Bin 7 30<35	Bin 8 35<40	Bin 9 40<45	Bin 10 45<50	Bin 11 50<55	Bin 12 55<60	Bin 13 = >60
00:00	4		31	5	0	0	0	0	0	2	1	0	0	0	0	0	0
01:00	1		29	9	0	0	0	0	1	0	0	0	0	0	0	0	0
02:00	1		35	6	0	0	0	0	0	0	1	0	0	0	0	0	0
03:00	0				0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	2		33	6	0	0	0	0	0	0	1	0	0	0	0	0	0
05:00	25	41	35	6	0	0	0	0	1	4	7	8	3	1	0	0	0
06:00	90	38	32	6	0	0	1	1	4	32	29	17	6	1	0	0	0
07:00	123	34	29	5	0	1	2	2	14	60	33	11	2	0	0	0	0
08:00	132	33	27	6	0	1	2	9	26	60	26	7	1	0	0	0	0
09:00	97	29	23	6	0	2	8	17	33	26	7	2	0	0	0	0	0
10:00	59	30	25	6	0	0	2	6	17	25	6	1	0	0	0	0	0
11:00	57	29	24	6	0	2	3	5	23	18	5	2	0	0	0	0	0
12:00	62	30	24	6	0	2	6	6	19	20	9	1	0	0	0	0	0
13:00	62	30	25	6	0	2	3	4	18	26	8	1	0	0	0	0	0
14:00	61	31	26	6	0	0	2	6	18	23	10	2	0	0	0	0	0
15:00	93	30	24	6	0	2	7	9	31	31	9	3	0	0	0	0	0
16:00	101	31	26	5	0	1	3	7	23	47	17	3	0	0	0	0	0
17:00	116	33	28	5	0	1	2	4	21	55	26	7	0	0	0	0	0
18:00	90	32	28	5	0	0	1	2	16	49	17	5	0	0	0	0	0
19:00	51	33	28	5	0	0	1	1	7	25	14	4	0	0	0	0	0
20:00	28	34	29	5	0	0	0	0	5	11	9	2	1	0	0	0	0
21:00	20	33	29	4	0	0	0	0	3	10	5	2	0	0	0	0	0
22:00	16	31	28	4	0	0	0	0	2	10	2	1	0	0	0	0	0
23:00	10		30	5	0	0	0	0	1	5	3	1	0	0	0	0	0
Total																	
12H(7-19)	1053	32	26	6	1	13	41	77	257	440	173	45	5	1	0	0	0
16H(6-22)	1243	33	27	6	1	13	43	79	275	518	230	69	12	2	0	0	0
18H(6-24)	1269	33	27	6	1	13	43	79	278	534	235	71	13	2	0	0	0
24H(0-24)	1302	33	27	6	1	13	43	79	280	540	245	80	16	4	0	0	0
AM Peak	08:00 132		05:00 35	01:00 9	09:00 0	09:00 2	09:00 8	09:00 17	09:00 33	08:00 60	07:00 33	06:00 17	06:00 6	05:00 1	05:00 0	06:00 0	11:00 0
PM Peak	17:00 116	20:00 34	23:00 30	12:00 6	13:00 0	15:00 2	15:00 7	15:00 9	15:00 31	17:00 55	17:00 26	17:00 7	20:00 1	17:00 0	23:00 0	23:00 0	23:00 0

VDA-pro R2 06/03/2019

Site No. 84202227 Site Ref. 84202227
Wing Road, Cublington opposite community centre
Speed Summary (Mon-Fri)-Speed Limit 30 Mph

From 25/02/2019 To 04/03/2019

Lat/Lng. 51.89262 -0.77724

Channel: Eastbound

	Total Volume	85th %ile	Mean Ave.	Std. Dev.	Bin 1 ≤5MPH	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<25	Bin 6 25<30	Bin 7 30<35	Bin 8 35<40	Bin 9 40<45	Bin 10 45<50	Bin 11 50<55	Bin 12 55<60	Bin 13 ≥60
00:00	1		33	2	0	0	0	0	0	0	1	0	0	0	0	0	0
01:00	1		32	5	0	0	0	0	0	1	1	0	0	0	0	0	0
02:00	0		33	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	2		35	5	0	0	0	0	0	0	1	1	0	0	0	0	0
04:00	2		33	4	0	0	0	0	0	0	1	0	0	0	0	0	0
05:00	15	40	34	6	0	0	0	0	0	3	5	3	2	1	0	0	0
06:00	44	40	34	6	0	0	0	0	1	12	13	11	4	2	0	0	0
07:00	116	38	33	5	0	0	0	2	4	29	42	31	7	1	0	0	0
08:00	118	37	32	6	0	1	2	1	6	28	51	24	5	0	0	0	0
09:00	85	34	26	8	0	3	7	7	15	23	20	9	1	0	0	0	0
10:00	55	36	30	6	0	0	2	2	7	16	19	7	2	0	0	0	0
11:00	61	35	29	7	0	1	2	2	7	18	21	8	1	0	0	0	0
12:00	64	36	29	7	0	1	2	4	9	17	20	11	2	0	0	0	0
13:00	72	38	31	7	1	0	2	2	7	17	23	14	6	0	0	0	0
14:00	81	37	31	6	0	0	1	1	7	24	28	15	3	1	0	0	0
15:00	103	37	31	6	0	1	2	3	9	26	38	19	4	0	0	0	0
16:00	152	38	33	5	0	0	0	1	7	33	61	39	10	2	0	0	0
17:00	163	38	32	5	0	0	1	1	5	38	70	35	10	1	0	0	0
18:00	102	38	32	6	0	0	1	1	4	28	39	21	6	1	0	0	0
19:00	49	39	34	6	0	0	0	0	1	9	19	13	6	0	0	0	0
20:00	25	40	34	7	0	0	0	0	1	5	8	7	3	1	0	0	0
21:00	18	38	33	6	0	0	0	0	1	3	8	4	2	0	0	0	0
22:00	15	40	34	7	0	0	0	0	0	4	5	3	2	1	0	0	0
23:00	5		33	7	0	0	0	0	0	1	2	1	0	0	0	0	0
Total																	
12H(7-19)	1172	38	31	6	2	6	22	26	86	298	432	234	56	7	2	0	0
16H(6-22)	1308	38	31	6	2	7	22	27	90	327	480	269	71	10	2	0	0
18H(6-24)	1328	38	31	6	2	7	23	27	91	332	487	273	73	12	2	0	0
24H(0-24)	1351	38	32	6	2	7	23	27	91	336	496	278	76	12	2	0	0
AM Peak	08:00 118		03:00 35	09:00 8	09:00 0	09:00 3	09:00 7	09:00 7	09:00 15	07:00 29	08:00 51	07:00 31	07:00 7	06:00 2	11:00 0	06:00 0	11:00 0
PM Peak	17:00 163	22:00 40	20:00 34	13:00 7	13:00 1	12:00 1	12:00 2	12:00 4	15:00 9	17:00 38	17:00 70	16:00 39	17:00 10	16:00 2	17:00 0	20:00 0	23:00 0

VDA-pro R2 06/03/2019

Site No. 84202227 Site Ref. 84202227
Wing Road, Cublington opposite community centre
Speed Summary (Mon-Fri)-Speed Limit 30 Mph

Lat/Lng. 51.89262 -0.77724

From 25/02/2019 To 04/03/2019

Channel: Not Assigned

	Total Volume	85th %ile	Mean Ave.	Std. Dev.	Bin 1 ≤5MPH	Bin 2 5<10	Bin 3 10<15	Bin 4 15<20	Bin 5 20<25	Bin 6 25<30	Bin 7 30<35	Bin 8 35<40	Bin 9 40<45	Bin 10 45<50	Bin 11 50<55	Bin 12 55<60	Bin 13 ≥60
00:00	5		31	4	0	0	0	0	0	2	2	1	0	0	0	0	0
01:00	3		31	7	0	0	0	0	1	1	1	0	0	0	0	0	0
02:00	1		35	6	0	0	0	0	0	0	1	0	0	0	0	0	0
03:00	2		35	5	0	0	0	0	0	0	1	1	0	0	0	0	0
04:00	4		33	5	0	0	0	0	0	1	2	1	0	0	0	0	0
05:00	40	41	35	6	0	0	0	0	1	7	13	12	5	2	0	0	0
06:00	134	39	32	6	0	0	1	1	5	44	42	29	10	2	0	0	0
07:00	239	37	31	6	0	1	2	4	17	88	75	42	9	1	0	0	0
08:00	250	35	29	6	1	2	4	10	32	88	77	31	6	1	0	0	0
09:00	182	32	25	7	1	5	15	24	47	49	27	11	1	1	0	0	0
10:00	114	34	27	6	0	0	4	8	24	41	25	8	2	1	0	0	0
11:00	118	34	27	7	0	2	5	7	29	36	27	9	1	0	0	0	0
12:00	127	34	27	7	0	2	8	10	28	37	28	12	2	0	0	0	0
13:00	134	35	28	7	1	2	5	6	25	43	31	15	6	0	0	0	0
14:00	141	35	29	6	0	0	3	7	25	47	38	17	3	1	0	0	0
15:00	195	35	28	7	0	2	9	12	40	58	47	22	4	0	0	0	0
16:00	253	37	30	6	0	2	3	7	30	81	77	42	10	2	0	0	0
17:00	279	36	31	6	0	1	3	5	27	93	96	43	10	1	0	0	0
18:00	192	36	30	6	0	0	2	3	20	77	55	26	7	1	0	0	0
19:00	100	37	31	6	0	1	1	1	8	34	32	17	6	0	0	0	0
20:00	54	38	32	7	0	0	0	1	6	16	16	9	4	1	0	0	0
21:00	38	36	31	5	0	0	0	1	4	13	14	5	2	0	0	0	0
22:00	30	37	31	6	0	0	0	0	2	14	7	3	2	1	0	0	0
23:00	15	36	31	6	0	0	0	0	1	6	4	2	1	0	0	0	0
Total																	
12H(7-19)	2225	35	29	7	3	19	63	103	343	738	605	278	62	9	2	0	0
16H(6-22)	2552	36	29	7	3	20	65	106	365	845	710	338	83	13	2	1	0
18H(6-24)	2597	36	29	7	3	20	65	106	369	866	721	344	86	14	2	1	0
24H(0-24)	2653	36	29	7	3	20	65	106	371	877	741	358	92	16	2	1	0
AM Peak	08:00 250		03:00 35	09:00 7	09:00 1	09:00 5	09:00 15	09:00 24	09:00 47	07:00 88	08:00 77	07:00 42	06:00 10	06:00 2	11:00 0	06:00 0	11:00 0
PM Peak	17:00 279	20:00 38	20:00 32	13:00 7	13:00 1	12:00 2	15:00 9	15:00 12	15:00 40	17:00 93	17:00 96	17:00 43	17:00 10	16:00 2	17:00 0	20:00 0	23:00 0

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APPENDIX C Alternative Traffic Calming Features

10.8 A wide range of traffic calming measures were considered for this scheme. While the measures proposed in the report above were deemed to be feasible, others were discounted as they were not suitable for the site. Some of these traffic calming features are described below.

- 10.8.1 Rumble strips – Rumble strips are short, raised road lines that create a warning vibration when driven over. They are used to warn drivers of hazards or a change in driving conditions. TfB do not recommend using this method due to the noise created which is a nuisance to local residents. Rumble strips may cause the aesthetics of the village to be more urbanised and some studies have shown that vehicles actually speed up as an attempt to reduce the effects.
- 10.8.2 Gateway feature – Gateway features are used to highlight the change from a rural road to a more populated area. These can often be fitted with a village or town nameplate. Ideally, gateways should be located at the entry to a village or start of a speed limit and can include road surface treatments and lining such as dragon's teeth. Gateway features must be passively safe to address safety concerns, which reduces the types of materials that are available for use. Gateway features have many positive features such as increasing the driver's awareness, maintaining the villages character and clearly defining the boundary of the village so reduction of speed can commence. Gateways can also have drawn backs such as limited effect when in isolation, location may not be suitable due to verge widths and Department for Transport (DfT) approval is required for some designs to ensure minimal damage is caused if involved in a collision.
- 10.8.3 Speed cushions – This method of traffic calming is only considered where other less intrusive methods are not available or have not been successful. Traffic calming regulation discourage speed cushions to be used in isolation. It is recommended that a speed reducing feature is used in advance of a road hump to avoid high speed approaches as these could have safety implications. The feature should be less than 60 metres in advance of the first hump to be most effective. Appropriate features include junctions, bends of 70 degrees or more, mini-roundabout's, and 'give way' markings at pinch points to create priority working. Speed cushions can create an urbanised feel to the environment and can result in unnecessary noise pollution via the vibrations caused, sharp accelerating and harsh braking. TfB have therefore concluded that speed cushions are not suitable for introduction at this site.

- 10.8.4 Mobile Vehicle activated signs – VAS/MVAS are used to address speeding on roads where conventional signs are not effective. They do not replace conventional signs but are designed to be activated when approached by vehicles driving over the speed limit otherwise the sign remains blank. VAS are permanent installations and will remain in the same location, while moveable vehicle activated signs (MVAS) are also available and will act in the same way as VAS with the ability to be moved to a suitable location. The aim of this is to encourage a safer driving speed and improve road safety throughout the area. They can be purchased and then moved around the village to pre-agreed locations, co-fixed onto existing posts or onto a moveable post secured by ground screws. VAS/MVAS have many positive outcomes such as they are only activated by vehicles speeding and can be located on existing posts. A fixed VAS is currently positioned on the near the crossroads facing the westbound direction. It was decided not to use an additional VAS facing the eastbound direction due to the minimal effectiveness of the existing VAS in the opposite direction.
- 10.8.5 Traffic Island/refuges- Islands/refuges are used as traffic calming measures to ensure vehicle speeds are reduced along with providing control lane discipline. Islands can be effective traffic calming measures when used in the correct locations, to prevent vehicles overtaking on high speed or volume roads, or where pedestrian movement is required.
- 10.8.6 Traffic islands/refuges have many positive outcomes, such as:
- They provide pedestrian crossing points on busy roads.
 - When islands are used in the correct location they can prevent overtaking.
 - Islands/refuges can provide adequate locations for the introduction of signage and bollards.
- 10.8.7 There are also restrictions to using islands/refuges, such as:
- Islands/refuges can prove to be quite costly.
 - They need to be designed with a safety-first policy as many islands/refuges provide a crossing point for pedestrians.
- 10.8.8 This traffic calming measure was discounted immediately as the road widths are far too narrow, although it is appreciated that it would be highly effective.