
Meeting: Delegated Decisions by the Executive Member for Community Services on Traffic Regulation Orders
Date: 17th June 2015
Subject: Bedford Road, Houghton Conquest – Consider Options for Traffic Calming Scheme
Report of: Paul Mason, Head of Highways
Summary: This report considers alternative speed reducing measures for Bedford Road Houghton Conquest and requests the approval of the Executive Member for Community Services for the installation of Traffic Calming Measures in Bedford Road, Houghton Conquest

Contact Officer: Nick Chapman
nick.chapman@amey.co.uk
Public/Exempt: Public
Wards Affected: Houghton Conquest and Haynes
Function of: Council

CORPORATE IMPLICATIONS

Council Priorities:

This proposal supports the following council priorities:

- Enhancing your local community – creating jobs, managing growth, protecting our countryside and enabling businesses to grow.
- Promote health and well being and protect the vulnerable
- Better infrastructure – improved roads, broadband reach and transport

Financial:

The overall cost of the scheme will be approximately £59,600.

The budget for this comes from Local Area Transport Plan allocations as specified in Central Bedfordshire's Local Transport Plan.

Legal:

None from this report

Risk Management:

None from this report

Staffing (including Trades Unions):

None from this report

Equalities/Human Rights:

None from this report

Community Safety:

The proposal will improve road safety for all road users, but in particular pedestrians, cyclists and other vulnerable road users in Blunham. This proposal will significantly increase the safety of pupils on the route to and from schools in the area.

Sustainability:

The proposal will support and encourage sustainable travel in line with approved CBC policy.

RECOMMENDATION(S):

That having made full consideration of the relative costs and merits of alternative speed reducing measures the proposal to install Traffic Calming Measures be implemented as published.

CBC Transport and Planning Policy

1. This scheme had been developed in line and in accord with Central Bedfordshire Council policies and priorities as outlined in:-

Local Transport Plan 2011 – 2026 (*Adopted April 1st, 2011*)

- a) Appendix E Walking Strategy
- b) Appendix F Cycling Strategy
- c) Appendix X Transport Asset Management Plan

Local Area Transport Plan – Haynes and Old Warden (including Houghton Conquest) (*Adopted April 1st, 2013*)

2. All of these documents were fully consulted upon as part of their development process. All of these documents and the policies within them were formally adopted by CBC.

Background Information

3. The original scheme was developed to address issues related to speeding vehicles and road safety concerns. All these issues have been identified as points to be addressed by CBC officers and members as well as Houghton Conquest parish council.

4. Bedford Road is one of the main routes into Houghton Conquest. The road is relatively straight, with properties generally set back from the road, particularly at its north-west end. These factors tend to encourage higher traffic speeds.
5. The traffic calming scheme was formally advertised by public notice during December 2014 and January 2015. Consultations were carried out with the emergency services and other statutory bodies, Houghton Conquest Parish Council and the Ward Member. Residents living alongside this length of road were individually consulted.
6. A report was presented to the Delegated Decisions meeting held on 18th Feb 2015 that considered the objections received to the proposals but, on balance, recommended the implementation of the scheme as advertised. The original report is attached as Appendix A
7. At the meeting there were a number of speakers in support of the objections and questions were raised in respect of the possibility of looking at camera enforcement as an alternative to physical traffic calming.
8. As it was not possible to provide detailed responses to these questions at the meeting officers were asked to undertake a comparison of the possible alternatives and to report these back to the next available Delegated Decisions meeting for further consideration.
9. The options assessment was undertaken and is included as appendix B. It sets out the relative costs of the possible alternatives as well as providing pros and cons for them.
10. Whilst either type of camera enforcement would be possible, spot or average speed, both options are considerably more costly than the traffic calming scheme and would require annual maintenance none of which would currently be funded from any fines that might be generated from the cameras. In the case of the spot camera it would also be less effective as it would only control speed at the camera and for a short distance either side. It should be noted that the revenue from speeding fines goes to the exchequer.
11. The assessment report therefore concludes that the most cost effective solution is the physical calming as it is less costly to implement and does not carry a fixed annual maintenance cost, other than general highway maintenance as may be required, to be found from revenue budgets.

Representations and Responses

12. A total of 20 representations were received to the original proposal. Five were clear objections to the scheme, or elements of it. Two, including the Parish Council were in support. The remainder were a mixture of responses with general support for lowering traffic speeds but preferring other means of doing so, such as camera enforcement.

13. Having carried out a relative assessment of the options as requested the recommendation is that the traffic calming measures as originally proposed is the most cost effective method to reduce speeds in this location. It can be achieved within the original budget which has been carried forward to the current financial year. It is therefore requested that the traffic calming proposal be approved for implementation.

Appendices:

Appendix A – Previous Report

Appendix B - Options Assessment

Appendix A

Meeting: Delegated Decisions by the Executive Member for Community Services on Traffic Regulation Orders

Date: 18 February 2015

Subject: Bedford Road, Houghton Conquest – Consider Objections to Proposed Traffic Calming Scheme

Report of: Paul Mason, Head of Highways

Summary: This report seeks the approval of the Executive Member for Community Services for the installation of Traffic Calming Measures in Bedford Road, Houghton Conquest

Contact Officer: Nick Chapman
nick.chapman@amey.co.uk

Public/Exempt: Public

Wards Affected: Houghton Conquest and Haynes

Function of: Council

CORPORATE IMPLICATIONS

Council Priorities:

This proposal supports the following council priorities:

- Enhancing your local community – creating jobs, managing growth, protecting our countryside and enabling businesses to grow.
- Promote health and well being and protect the vulnerable
- Better infrastructure – improved roads, broadband reach and transport

Financial:

The overall cost of the scheme will be approximately £59,600.

The budget for this comes from Local Area Transport Plan allocations as specified in Central Bedfordshire's Local Transport Plan.

Legal:

None from this report

Risk Management:

None from this report

Staffing (including Trades Unions):

None from this report

Equalities/Human Rights:

None from this report

Community Safety:

The proposal will improve road safety for all road users, but in particular pedestrians, cyclists and other vulnerable road users in Blunham. This proposal will significantly increase the safety of pupils on the route to and from schools in the area.

Sustainability:

The proposal will support and encourage sustainable travel in line with approved CBC policy.

RECOMMENDATION(S):

That the proposal to install Traffic Calming Measures be implemented as published.

CBC Transport and Planning Policy

2. This scheme had been developed in line and in accord with Central Bedfordshire Council policies and priorities as outlined in:-

Local Transport Plan 2011 – 2026 (*Adopted April 1st, 2011*)

d) Appendix E Walking Strategy

e) Appendix F Cycling Strategy

f) Appendix X Transport Asset Management Plan

Local Area Transport Plan – Haynes and Old Warden (including Houghton Conquest) (*Adopted April 1st, 2013*)

3. All of these documents were fully consulted upon as part of their development process. All of these documents and the policies within them were formally adopted by CBC.

Background Information

4. The scheme has been developed to address issues related to speeding vehicles and road safety concerns. All these issues have been identified as points to be addressed by CBC officers and members as well as Houghton Conquest parish council.

14. Bedford Road is one of the main routes into Houghton Conquest. The road is relatively straight, with properties generally set back from the road, particularly at its north-west end. These factors tend to encourage higher traffic speeds.

15. The traffic calming scheme was formally advertised by public notice during December 2014 and January 2015. Consultations were carried out with the emergency services and other statutory bodies, Houghton Conquest Parish Council and the Ward Member. Residents living alongside this length of road were individually consulted.

Speed and Traffic Count Data

6. In order to understand and quantify some of the issues on Bedford Road a survey was undertaken. This measured the volume of traffic, vehicle classification and vehicle speeds.

Dates of Collection: 6 th – 12 th November, 2014
Location:
1) Bedford Road, Houghton Conquest, adjacent to number 72
2) Bedford Road, Houghton Conquest, 25m north of Crancott Close
Speed data (85th percentile, weekday average)
1) Northbound – 41.85mph – 85% of vehicles over speed limit
1) Southbound – 36.33mph – 53% “
1) Combined – 39.18mph – 69% “
2) Northbound – 31.98mph – 31% of vehicles over speed limit
2) Southbound – 30.83mph – 25% “
2) Combined – 31.58mph – 28% “
Volume (weekday average)
1) Northbound – 1,021 vehicles
1) Southbound – 1,064 vehicles
1) Combined – 2,085 vehicles
2) Northbound – 987 vehicles
2) Southbound – 1,025 vehicles
2) Combined – 1,858 vehicles
Vehicle Classification
Motorcycles and Pedal Cycles – 1%
Cars – 92%
LGVs – 7%

Representations and Responses

7. A total of 20 representations have been received; five of which have raised clear objections to the whole scheme or elements of it. Two respondents, including Houghton Conquest Parish Council, support the scheme. The remainder represent a mixed response with many people generally supporting attempts to lower traffic speeds, but are not in favour of road humps and would prefer other forms of lowering speeds, such as speed cameras. Copies of the correspondence are included in Appendix D.
8. The main points of objection are summarised below:-
- a) Road humps are ineffective and cause more accidents than they prevent.
 - b) They will create problems for residents accessing driveways and will generate noise and vibration, which will lower property values. They will cause damage to vehicles and increase emergency service response times. Humps cause significant discomfort to disabled persons.

- c) Increasing volumes of traffic through Houghton Conquest caused by future local housing developments will exacerbate the situation.

- d) The proposed chicane should be re-located north-westwards to ensure that it does not create access difficulties for residents.
- e) Speed cameras would be a better solution.
- f) Chicanes would be more effective and would create less of a maintenance liability.
- g) The money would be better spent on improving the road surface.

9. Central Bedfordshire Highways' response to the points above are as follows:-

- a) Road humps are acknowledged to be an effective method of reducing traffic speeds. The majority of drivers will slow down for road humps and most will maintain a lower speed if the humps are placed at reasonable intervals. There is no evidence to suggest that they increase the number of collisions. Lower speeds mean that any collisions that do occur will be of lesser severity.
- b) The scheme is fully compliant with current regulations and statutory guidance. The measures proposed have been accepted as suitable for emergency vehicles and will not bring about an unacceptable delay to their response times. All of the emergency services have been consulted and have raised no objections to this particular scheme.
- c) Raised traffic calming features inevitably create some noise and disruption to adjacent residents, but this is likely to be negligible. Lower traffic speeds usually result in a reduction in overall noise levels.
- d) Whilst a high percentage of vehicles do speed along Bedford Road it fortunately does not have a history of injury accidents and hence does not meet the requirements for the implementation of safety cameras. Cameras can be effective but are very expensive and the budget for this scheme is insufficient for their implementation or the ongoing maintenance and operational costs.
- e) Safety cameras could be utilised to reduce spot speeds but they do not encourage any reduction in speeds away from the camera locations.
- g) Chicanes can also be an effective slowing feature, but in some cases approaching drivers will accelerate to avoid the need to give way to opposing traffic. They also prevent parking near to them, so their location must be carefully considered as part of the suite of measures so could be opposed by some residents, particularly those with limited off-road parking capacity.

- e) This scheme is funded through the Local Area Transport Plan budget which is a separate budget line to the Highways maintenance programme which funds road surface maintenance.

10. Bedfordshire Police have raised no objection to the proposals.

Conclusion

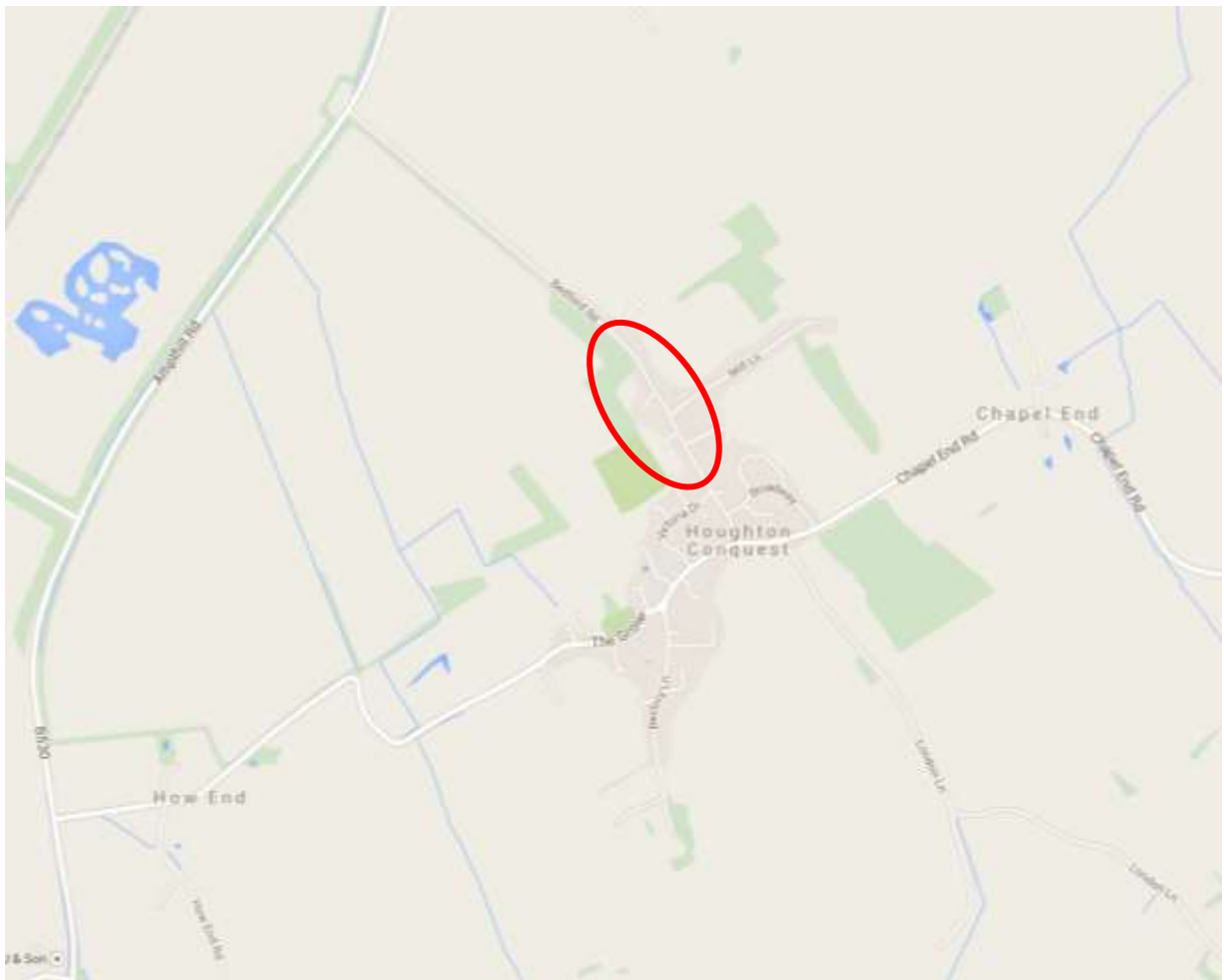
It is considered that the proposed measures will provide a cost effective traffic calming scheme and will reduce the speed of vehicles in Bedford Road. It is considered that the proposal will have no significant negatives impacts on the area or those living nearby. Hence, it is recommended that the proposal should be implemented as published.

If approved the works are expected to take place within the current financial year.

Appendices:

- Appendix i – Location plan
- Appendix ii – Public Notices of Proposals
- Appendix iii – Drawing of Proposals
- Appendix iv – Representations

Appendix i



PUBLIC NOTICE



HIGHWAYS ACT 1980 – SECTION 90A-I

PROPOSED TRAFFIC CALMING MEASURES – BEDFORD ROAD, HOUGHTON CONQUEST

NOTICE IS HEREBY GIVEN THAT CENTRAL BEDFORDSHIRE COUNCIL, in exercise of its powers under Section 90 A-I of the Highways Act 1980 and all other enabling powers, proposes to construct two raised tables, a road hump and a chicane in Bedford Road, Houghton Conquest. These works are part of a scheme to reduce traffic speeds and create a safer environment for road users and residents.

Raised Tables at a nominal height of 75mm extending across the full width of the road, except for drainage channels, are proposed to be sited at the following locations in Bedford Road, Houghton Conquest:-

1. At a point approximately 60 metres north-west of its junction with Bunyan Close.
2. At a point approximately 20 metres south-east of its junction with Mill Lane.

A Round-top Road Hump at a nominal height of 75mm extending across the full width of the road, except for drainage channels, is proposed to be sited at the following location in Bedford Road, Houghton Conquest:-

1. At a point approximately 30 metres south-east of its junction with Crancott Close.

A Traffic Calming Chicane comprising kerb build-outs on alternate sides of the road (traffic proceeding south-eastwards required to give way to opposing traffic) is proposed to be sited at the following location in Bedford Road, Houghton Conquest:-

1. Approximately outside property nos.74 and 76 Bedford Road.

Further Details a drawing may be examined during normal office hours at the address shown below; viewed online at www.centralbedfordshire.gov.uk/publicstatutorynotices or tel. 0845 3656116.

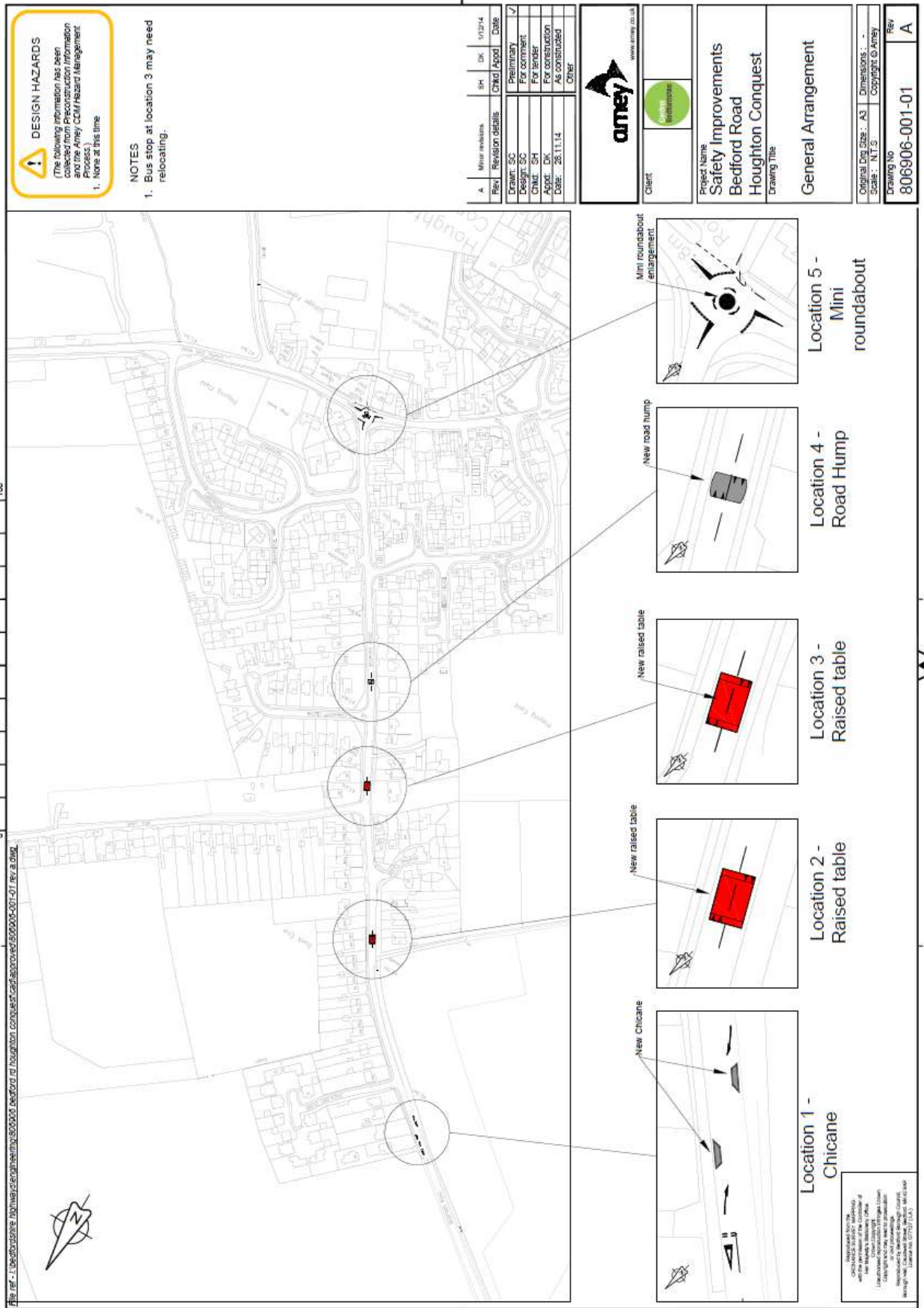
Comments should be sent in writing to the Transportation Manager, Central Bedfordshire Highways, Woodlands Annex, Manton Lane, Bedford MK41 7NU or e-mail centralbedsconsultation@amey.co.uk by 16 January 2015.

Central Bedfordshire Council
Priory House
Chicksands
Shefford SG17 5TQ

Marcel Coiffait
Director of Community Services

18 December 2014

Appendix iii



Appendix iv

I am writing in response to your letter dated 16th December 2014 informing me of Central Bedfordshire Council's intention to put traffic calming procedures in place along Bedford Road.

I have lived in Bedford Road for twenty five years and to my knowledge there have been no traffic accidents in that time.

I **strongly oppose** the plans to place speed bumps along Bedford Road. Speed bumps have been proven to be ineffective and to cause more accidents than they prevent. They induce injury to road users rather than controlling speeds which supposedly is why these measures are being proposed.

The reasons for my opposing this scheme are as follows:

1. Road humps are regulated by 'The Highways (Road Humps) Regulations 1999' and according to the plan presented, the planned humps for Bedford Road do not comply with these regulations with regard to the spacing and entry points.
2. The hump allocated outside my property will undoubtedly cause noise and vibration problems to myself and other neighbouring properties.
3. This hump outside my property will be a big concern to me whilst turning in and out of my drive. Even more so when there are adverse driving conditions such as ice on the road. This is introducing a hazard which is not there at the moment.
4. The hump allocated outside my property is of considerable distance from the entry point to the village and speeds higher than 20mph will undoubtedly be obtained by those drivers who habitually speed through the village.
5. The humps have been proven to lower the value of properties in those areas where they have been introduced.
6. In some areas evidence has been produced to show that humps are unsafe and these councils have had to go to the added expense of removing them.
7. Humps have been proven to cause more than 25% more wear and tear to suspension units and tyres on motor vehicles.
8. Humps are a hazard to emergency vehicles and increase the length of time in responding to incidents.

Finally I should point out that Bedford Road is being used as a rat run for motorists from the A6 at busy times of the day as they strive to avoid the bottleneck conditions at the junction further up the A6 towards Bedford.

If speeding vehicles are a problem I believe we all know that humps are not the cure but simply an inconvenience to all road users even those who abide by the speed limit. Why are Houghton Conquest residents being penalized for other speeding motorists by introducing humps?

The solution to the speed problem is to install average speed cameras at the top and bottom of Bedford Road. These have been proven to work in Milton Earnest, Barkers Lane Bedford and Stewartby.

Under the Freedom of Information Act I would like to request that you send me the speed and accident data for Bedford Road and advise me on accessing any data collected in Stewartby prior to and after the fitting of average speed cameras. I would be interested to know how the data for Bedford Road compares with that collected for other roads in the area.

I write to register my objections to the proposed traffic calming and more over your choice of how to do so,
Having worked in the highways industry i personally have seen many similar type projects that have either not worked or caused more issues than intended to cure and subsequently been removed at a later date,
In this day and age there are more and more sufficient ways of calming traffic such as anpr average speed cameras, which incidentally raise revenue for the council as well as being a deterrent,
Many such systems are being implemented throughout central beds and beds borough and proving very effective, such as barkers lane in Bedford, stewartby village for example
Also on a personal note one of the humps is planned directly in front of my house which again besides being an absolute eyesore will produce an unwanted traffic noise from vehicle tyres pounding over it,

We wish to raise our **objections** with this proposal. We are not happy with the scheme for multiple reasons.

We already find it difficult to get out of our shared drive (78 & 76 exit through 1 driveway) & have already had a number of near misses. The field on the boundary of our property also has an entrance for their agricultural vehicles. The proposal will encourage vehicles to stop outside our shared drive further obscuring our view of the road. Both myself and my son are disabled and due to these pre existing difficulties we were about to apply to add an additional entrance to our drive making it easier for us to get in and out. This proposal will directly inhibit us from achieving this.

We don't believe the traffic calming scheme will achieve it's objective. Road humps just encourage drivers to speed between them, adding noise and higher emissions.

A better solution would be to install average speed cameras as approved in the neighbouring village of Stewartby.

I am writing to oppose the proposed traffic calming scheme for Houghton Conquest.

The proposed speed humps will do little to curb speeding in the village as a whole and lead to the acceleration and deceleration of vehicles between them with consequent noise and vibration. The scheme will cause a degradation to the quality of life for those living in the immediate vicinity of the speed humps.

There is empirical evidence to indicate that speed humps are not successful in tackling persistent speeders and also that in operation lead to injuries, accidents and damage or at least increased wear and tear to vehicles. Speed humps cause considerable inconvenience to those law abiding villagers who although not speeding are forced to negotiate this artificial obstacle.

Stewartby village has been fitted with average speed cameras with Bedford Borough Council citing the relative saving of fitting cameras as opposed to road humps as one reason for their deployment.

In summary, Speed humps do not work, have many negative side effects and are more expensive than average speed cameras which do work.

I look forward to assisting in making the case for average speed cameras at a forthcoming planning meeting.

In response to your letter of 16th December 2014 that informed me of your intention to install so called traffic calming measures in Bedford Road Houghton Conquest consisting of raised tables, road hump and a chicane, as well as increasing the size of the mini roundabout at the top of the road outside the public house.

I would like to inform you that I we are very much against any form of SPEED BUMPS along Bedford Road and strongly oppose your decision to install them as they have been proven to be ineffective in reducing speed to any great extent, and cause increased pollution when motorists speed up again after passing over them. They also have been known to cause accidents.

My wife is a disabled person with a blue badge and these humps in the road outside our home will cause her great discomfort and possibly further injury.

Reasons to drop this scheme;-

1 – The hump outside our home will cause us great concern when turning into or driving out of our property especially when the road is subject to adverse weather conditions like ice or even snow.

2 – The hump outside our home will undoubtedly cause vibration and noise problems to anyone living near to them. Will the council compensate us for the damage caused?

3 – Road humps cause adverse wear and tear on vehicles tyres and suspensions units and as we all in this area would be driving over them on a regular basis, will the council pay the repair bills?

4 – These road humps are known to reduce the value of properties in the roads where they are introduced.

5 – Emergency vehicles would be slowed down in their response time by these road humps.

6 – There is no foot path outside our home, so pedestrians regularly walk on the road.

We have lived in Bedford Road, Houghton Conquest for ten years now and have never known of any accidents in the road.

If this is incorrect, then I would request under the “Freedom of Information Act” that you send us details of all accidents that have occurred in the village and any speeding offence records for Bedford Road.

These road humps are not the cure for any problem in Bedford Road. The only proper remedy is to install average speed cameras at each end of the road. These have been introduced in other locations such as Stewartby and Bedford and have proved to actually work very well.

With reference to the proposed traffic calming measures. I heartily agree that something needs to be done to stop the speeding along the Bedford Road. I would like to make the following comments:-

1. In my experience as a regular driver for over 50 years, having also driven in many countries apart from the UK, speed bumps do not deter the speeding offenders.
2. Speed bumps cause discomfort to people with arthritis or injuries to the back and neck particularly after surgery. It is also uncomfortable when travelling in an ambulance.
3. They are a hazard in the dark when it is wet or when covered in snow and ice as they cannot be seen easily. Particularly to motorcycles and push bikes when it is icy.
4. They cause extra vibration which can have an adverse effect on properties causing cracking in walls.
5. Also of concern would be the milk deliveries which are in the early hours of the morning (approx. 2am) with an open back truck carrying milk crates which already cause enough noise without the added shaking caused by more bumps in the road.
6. There is a need to tackle parking on Bedford Road as sometimes cars are parked on both sides of the road, making it difficult to get through if there are a few cars travelling in both directions. Impossible for a bus. Perhaps yellow lines along one side or staggered, should be considered..
7. The high cost of these measures could be drastically reduced as they have sensibly decided to do in Stewartby by introducing average speed cameras. These would be far more effective as I am sure the residents of Stewartby would confirm.
8. I would suggest that cameras would be the preferred option. The sensible use of the money saved would be to fill in the holes, repair and level the Bedford Road on the approach to the village. This has been a botched up disgrace for many years.

9. With the huge development at The Wixams and the new houses at Kempston Hardwick we can expect an increase in traffic through the village particularly when the new railway station opens. It does not take much working out to realise that this will be used as a rat run. Since I have lived in this house the traffic has increase from a couple of cars per day in the mornings and evening when people left to and returned from work. To constant traffic throughout the day.
10. I welcome a well thought out, common sense solution to the speeding traffic but bumps and raised platforms are not the answer.

I trust common sense will prevail but will not hold my breath.

Thank you for sending the proposed traffic calming details referenced above.

I am in total agreement that these measure are necessary for Bedford Road but I strongly feel that chicanes would be more effective than the raised tables and road humps.

Road humps can be extremely uncomfortable for anybody suffering with any sort of body ailment, whereas with a chicane the road remains level and the vehicle is being driven slowly.

Also, as this is a main road through the village a lot of heavy vehicles use it constantly and over time this breaks up the road surface more quickly on either side of the humps.

Can you please explain why it is necessary to increase the size of the roundabout at the top of Bedford Road leading onto the High Street. At present, if you use the roundabout properly, it is very tight getting around it. If it is made any bigger most people will either go over it or simply cut across the road in front of it. I have seen this done with the small one.

These are my views which I hope you will take into serious consideration.

Further to our recent correspondence I have just received correspondence from a villager who attended the parish meeting and is also opposed to the road humps.

I am very surprised that this scheme is going to cost so much money £58,000 and over the years there will be maintenance to be considered.

Stewartby recently installed average speed cameras. Is this something that could be considered for Bedford Road?

You requested comment on your proposal to install physical traffic calming on Bedford Road, Houghton Conquest.

As a resident at xx Bedford Road for the last 26 years, your information that we have a problem with speeding traffic surprises me. Would you please forward the information and actual statistics you used to come to this conclusion.

As a regular user of this road, I find it hard to exceed the speed limit due to the number of parked cars, large pot holes and road subsidence. But if you have to spend money, I would suggest you bring the road surface up to an acceptable standard to give the best possible road holding. I assume that if Amey do install speed humps and ignore the existing road surface, we can claim from them direct for any damage to tyres or suspension or accidents where vehicles have lost control due to the defective surface.

Thank you for the opportunity to comment on the traffic calming measures proposed for Bedford Road.

I support the principle of making a safer environment for road users, but speed is not the only issue, nor is it a cause of bad driving; it is more usually a symptom of something else such as lack of awareness, lack of attention or lack of judgement. Of course, these are often intermingled. The solution is not necessarily to enforce a particular speed limit, since the speed limit might be too high or too low for particular circumstances. A better overall solution is to make the environment such that a reasonably prudent driver will naturally give attention to potential hazards and drive appropriately, including at an appropriate speed for the conditions (which might be much lower than the speed limit). With the correct built environment, the 'natural' speed for the road will be self-enforcing and the majority (85th percentile) of drivers will travel at or below it. I accept that there will be a few deliberately or reckless dangerous drivers who merit enforcement action.

Road humps or raised tables are rarely effective in producing this built environment, although there are schemes that can incorporate them, e.g. in Dunstable. Furthermore, humps are known:

- to contribute to damage to vehicles (as they are effectively a deliberate pothole), particularly in disrupting wheel alignment, thus causing potential risk to controllability of vehicles, increased fuel consumption and increased noise and tyre wear,
- to create additional pollution and noise as vehicles negotiate them (I anticipate that some of the large agricultural machinery that uses Bedford Road would make substantial noise bouncing over humps),
- to create discomfort and potential injury in vehicle passengers (especially buses and ambulances), and
- to impede emergency vehicles from making appropriate progress, especially fire appliances.

I object to the installation of road humps in the proposed scheme.

However, **I support** the installation of a chicane in the proposed position or perhaps a little further to the north-west. Chicanes tend to be much more effective than humps not only in reducing speed but also in making drivers refresh their attention to the road by contributing to the feeling (sometimes unconsciously) that more attention is needed.

I would **support** another chicane or two rather than the road humps. I would certainly advocate a chicane rather than the road hump that is proposed between Crancott Close and Victoria Drive, and rather closer to the latter so there is less of a wide-open straight on the approach to the village centre. I would also **support** more visual or psychological narrowing of Bedford Road by painted chicanes. This is quite common in France, where differently colours are often combined with very slight raised incursions into the carriageway from the kerbs.

There are a couple of other options to consider:

- The vehicle activated sign on the east bound approach to the village along Bedford Road is badly set up. When it activates at all, it is often too late to affect the offending driver and stays on too long so it appears to be flashing 'at' the next vehicle, even when it is travelling below the speed limit. It needs to be set so that it triggers at an offending driver before that vehicle enters the speed limit, and it needs to turn off as that vehicle passes the sign.
- Both councils should write to the local bus company asking it to educate its drivers about what the speed limit sign means!
- Further enforcement and encouragement for locals to park on the carriageway, not on the footway, would help to create informal 'chicanes' and contribute to the impression of hazards so that drivers would tend naturally to drive carefully. We might approach the Post Office to encourage its staff in this.
- I note that Stewartby has average speed cameras down its main street. I would support this approach for Bedford Road but it might not be effective in detecting this who turn off into their driveways or side roads between the cameras.
- It is common in Spain to have a traffic signal in the centre of villages, the sole purpose of which seems to be to stop any vehicle approaching above the speed limit, similar to a VAS but with enforcement capability.

I hope you find my comment useful and I have copied them to the Parish Council for information.

With reference to the above proposal, we would like to make the following comments.

- 1) Raised tables and round top road humps, in our experience, do not slow traffic down to any great extent. Observation shows that most motorists seem to approach these at too high a speed, totally oblivious of the fact that such practices cause damage to their vehicles.
- 2) Those motorists who do slow down for these obstructions then tend to accelerate and brake heavily between each obstruction, causing widespread variations in speed. This leads to additional noise (especially with larger vehicles), higher emissions and more vibration. The same comments apply to the chicane
- 3) Bedford Borough recently installed average speed cameras in Stewartby on cost grounds. Presumably they saw this as the most effective solution to the problem so why do Central Bedfordshire appear to have reached a different conclusion? Did anyone at Central Beds talk to their counterparts at Bedford Borough?
- 4) Whatever scheme is adopted, it needs to be future proofed (your proposal is not). To explain, whether or not the South Wixams transition scheme/country park happens, the proposed railway station will. We can see big increases in traffic along Bedford Road as more and more people use it as a rat run to/from the new station. This is why average speed cameras would be a more effective option and are virtually foolproof.
- 5) Will South Wixams transition scheme/country park construction traffic use Bedford Road on a daily basis? If so, it will make a bad situation even worse.

6) If the sensible option is chosen and average speed cameras are installed, consideration should be given to putting double yellow lines along Bedford Road to eliminate the current hazard of parked vehicles on both sides of the road.

I do not agree with the above proposal and would prefer average speed cameras similar to those used in Stewartby.

Presently various traffic calming methods are being suggested for Bedford Road including the roundabout at the top of the road and the High Street.

Bedford Road is badly in need of repair, apart from the "dreaded" pot holes the sides of the road in many places appear to be imploding.

Cushions, bumps etc. are never a popular choice, would it be too simplistic to repair the road to a High Standard, and have a couple of speed cameras installed?

This has proved to work extremely well in Stewartby, and would surely be easier to complete.

Is there any hope that the roundabout at the end of Rectory Lane could be removed? It does not truly work being in a very tight area, it is seldom used correctly and causes many problems to the residents of the Lane.

We understand that a traffic calming scheme proposed for the village will comprise of a number of road humps along Bedford Road. Whilst I agree that traffic calming is most definitely needed I would respectfully ask that you please consider the alternative of average speed cameras which we gather our neighbouring village of Stewartby have. Not only would the cameras be more effective but would also be cheaper so it would be a win win situation for all of those involved.

We agree on the whole with the measures proposed, but would just like to comment on the area from 62 to 76 Bedford Road. We think a build out is excellent, the one in Chapel End road has worked well at the start of the village.

There is a problem around 64/62 Bedford Road, with parked cars outside these properties. When coming into the village from the B530, the road has a curve, these parked cars completely obscure the view of oncoming traffic, and there have been a few near misses. It is said that parked cars help slow traffic down, but however slowly the cars on the left are travelling, they cannot see oncoming traffic, which is often at an increased speed as they are coming to the end of the 30 mph speed limit.

Could measures be taken to remove this hazard at the time of the proposed calming measures?

We wish to comment on the proposed traffic calming at Houghton Conquest as has been suggested in the latest documents.

Although we are very much in favour of anything that calms the traffic going through the village we are not in favour of the raised humps that are suggested.

We seem to be plagued by traffic coming through for the car auctions taking short cuts to and from the A6, trailer type vehicles which are not going at slow speeds. The noise from these will increase. The humps themselves also seem to do more damage on tyres because of their design.

This means that villagers themselves are going to be penalised more than passing traffic. Our suggestion would be average speed cameras as those that have been installed at Stewartby.

They could be installed throughout the village.

As I said, the village does need some sort of calming method, so any suggestions are more than welcome especially for pedestrians and the elderly using mobility scooters.

Thank you for your recent communication. I agree that traffic calming measures are required in Bedford Road before there is a serious accident.

However, road humps cause undue wear on the inside edge of vehicle tyres, I have just had to replace a full set which were worn in this manner as the route I have to travel has a considerable number of road humps. The rest of the tyre was still in good condition. The tyres were of a well known manufacturer and the reason for wear was given as road humps. I was also advised that suspension springs are affected due to the sharp up and down on humps and ramps regardless of the speed the vehicle is travelling, even at 10mph damage is being sustained similar to that caused by large potholes, that begs the question why not leave the potholes saving on road repairs and installation cost of humps and ramps

Larger vehicles capable of 'off road' are not affected so much by these obstacles and are able to negotiate them without the need to slow down.

Residents who drive standard family cars will have to negotiate these obstacles possibly several times a day, resulting in a great deal of wear and tear to their vehicles.

Emergency services will also be affected.

It is the rat runners, particularly those in larger 4x4 type vehicles, that require controlling without inconvenience to the locals.

Stewartby has average speed cameras which appear to work well.

Why not install Average Speed Cameras in Bedford Road Houghton Conquest ?

Thank you for taking time to read this.

We refer to your letter dated 16 December 2014 and express our comments and concerns as follows:

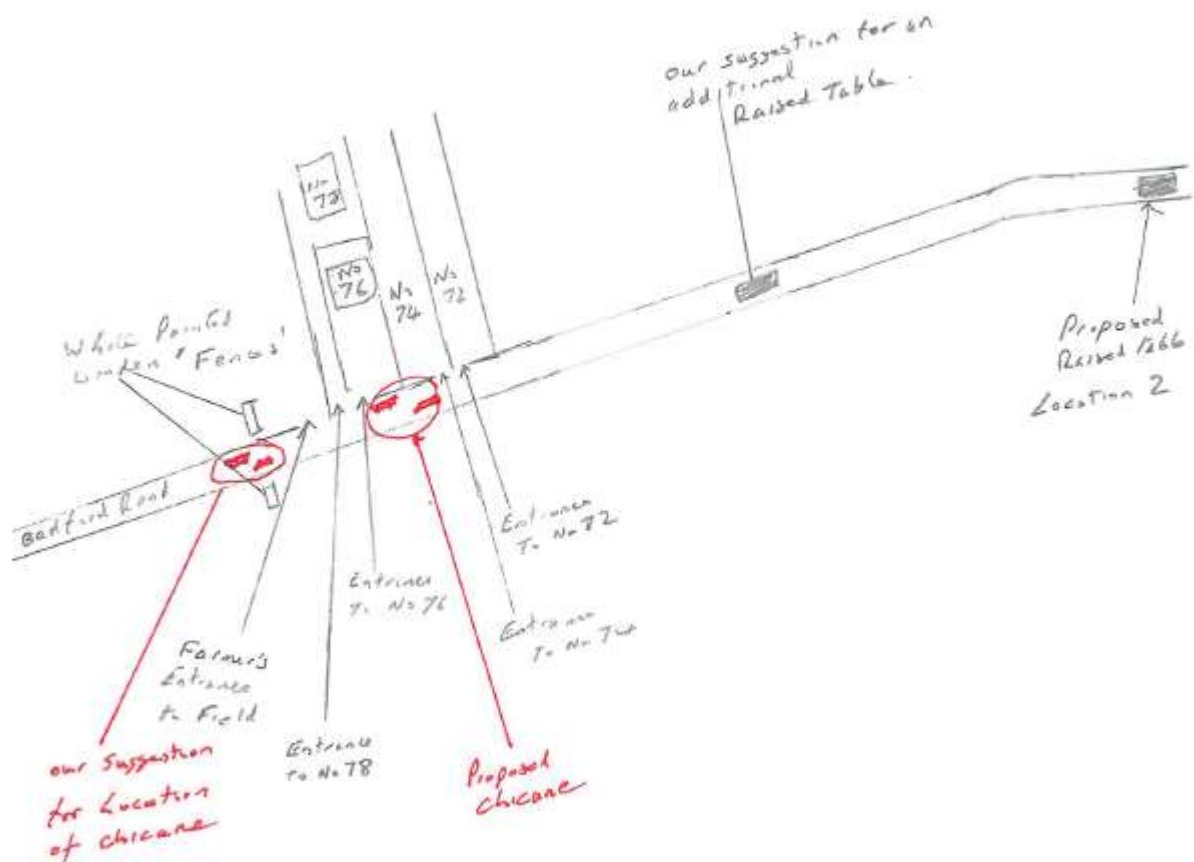
We agree that measures are required to slow traffic travelling into and out of the village along Bedford Road. However we are concerned about the positioning of the chicane outside the entrances to property nos. 78, 76, 74 and 72 Bedford Road. We believe that the positioning as proposed will interfere with the access and, particularly, the exit from each of these properties.

We consider that if a chicane is to be installed it should be moved further north-west along the road by about 50 metres to a position the other side of the white wooden structure marking the beginning of the village (see attached diagram and 2 photographs). In this position the chicane will not interfere with the access and exit from any of the properties in that area or with the farmer's entrance to his field adjacent to the entrance to property number 78.

As an alternative to a chicane, perhaps a 'Raised Table' or 'Road Humps' might be appropriate at the entrance to the village.

We also suggest that a further 'Raised Table' or 'Road Humps' should be added to the scheme at a point between property No. 78 and the Raised Table shown as location 2. It is a long stretch of road between these points and many vehicles reach speeds significantly in excess of 30mph along this stretch.

We trust that you will give careful consideration to our comments and that you will modify the proposal accordingly.



We are writing with our comments reference Proposed Traffic Calming Measures - Bedford Road, Houghton Conquest.

Firstly - about time!

We reside at xx Bedford Road, your proposed location 1 -Chicane will make entering and leaving our house very difficult especially as the traffic is increasing daily through our village. We feel it will also have a impact on the value of our house. Our suggestion for amending the proposal would be to move location 1 - Chicane to a point along Bedford Road before entering the village and the 30 zone. We wonder how this exisiting proposal will effect Mr Xxx's entry onto the adjacent field to our property.

We would to make it clear that we support all/any traffic calming solutions within the village but not to the detriment of its residents.

We are writing to confirm our support for the proposed Traffic Calming Scheme for Bedford Rd, Houghton Conquest.

Regards
Gill Wiggs
Houghton Conquest Parish Council

Concerning the proposed traffic calming measures for Bedford Rd Houghton Conquest;
absolutely brilliant, long overdue and very welcome. I sincerely hope these measures will slow the many. many people who choose to speed down this road with total disregard for the safety of residents and other road users, and ideally dissuade people from using it as a rat run from the A6 to the B530

Appendix 2

TITLE

**Bedford Road, Houghton
Conquest – Comparison of
Speed Reducing Options**

Report For: Central Bedfordshire Council

Prepared By: Lee Talbot

Date of Report: June 2015

Issue Record Sheet – Bedfordshire Highways

Revision N^o.	Date	Author	Reviewer	Comments
	June 2015	Lee Talbot	N Chapman	

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CONTENTS

Section	Topic
1	Executive Summary
2	Methodology
	Tables
3	Results
4	Advantages of Average Speed Cameras
5	Disadvantages of Average Speed Cameras
6	Advantages of Spot Cameras
7	Disadvantages of Spot Cameras
8	Advantages of Traffic Calming
9	Disadvantages of Traffic Calming
10	Recommendation
	Appendices
1	Supplementary Notes

1. Executive Summary

The physical traffic calming measures designed and consulted upon have been chosen as the preferred option. The preferred option will deliver an overall gain that is two-fold, when compared to the option of a safety camera solution.

The safety improvement scheme can be delivered with an initial estimates showing an approximate spend of £53,100. This scheme would prove to be more cost effective than installing an average speed or a spot camera whilst at the same time still delivering a similar effective physical traffic calming measure along Bedford Road.

Introduction

The purpose of this report is to identify and compare possible traffic calming measures for Bedford Road, Houghton Conquest.

The assessment considers whether an alternative traffic calming option, that of installing a speed camera solution along Bedford Road, Houghton Conquest will deliver financial betterment and therefore provide a suitable alternative approach to the physical safety improvement measures designed and consulted upon for this location.

This assessment is intended to assist Central Bedfordshire Council in determining if there is an available traffic calming measure that will reduce speeds along Bedford Road whilst and be delivered at or close a budget of £53,393.

2. Methodology

For the purposes of comparison to determine the most appropriate way of installing traffic calming measures along Bedford Road Houghton Conquest, three options have been identified:

- An Average Speed Camera Solution
- A Spot Speed Camera Solution
- Physical Traffic Calming Measures

At this stage the intention is to provide an installation and maintenance cost for the speed camera solutions along Bedford Road and compare this with the cost to install the proposed physical traffic calming measures.

Based on the project methodology set out in this assessment, Bedford Road Houghton Conquest would require a single '2 camera live link' average speed camera solution under Option 1 and a single spot camera under Option 2.

The cost has been calculated for Options 1 and 2 in line with previous proposals for camera installations in Bedfordshire and is presented below in tabular format (Tables 1 & 2).

Whilst the camera solutions are installed in isolation they do require a 'back-office' functionality to be installed at Bedfordshire Police Offices. This is for enforcement purposes (see Appendix 1).

The layout for Option 3, physical traffic calming measures are shown on *Drawing Number 806906-001-01 Revision A- General Arrangement* and have been priced up accordingly.

Table 1 below provides an installation cost for the average speed camera solution, whilst Table 2 provides a breakdown of the single 'spot' speed camera costs. Table 3 shows a breakdown of the physical measures installation and costs incurred.

Installation Costs (Approximate Costs)	Average Speed Camera
Purchase of Outstations (2 live Cameras, Pole top box, pole and bracket)	£40,600.00

Install Outstations - Commissioning, Validation, Connection to Back Office Instation	£17,000.00
Ancillary Works (incl. electrical/trenching/civils/TM) - based on installation at Stewartby Way, Stewartby	Up to £8,500.00
Amey Design Fee	£3,500.00
Sub Total	£70,000.00
Maintenance Costs over 5 Years	
12 months hardware/software support for two live cameras + revalidation process to prove and renew the enforced link certificate (over 4 years) (per annum cost - £9048)	£36190.00
12 months hardware and software support of the back office instation (over 4 years) (per annum cost - £2491)	£9960.00
Sub Total	£46,150.00
Total Cost	£116,150.00

Table 1- Option 1: Average Speed Camera Installation Costs

Installation Costs (Approximate Costs)	Spot Camera
Purchase of Camera (Single live Digital Camera)	£34,200.00
Installation of Camera Housing Unit	£34,730.00
Ancillary Works (incl. electrical)	£2,500.00
Amey Design Fee	£2,500.00
Sub Total	£73,930.00
Maintenance Costs over 5 Years	
Camera Calibration (provides calibration from Month 12 to 60)	£4,100.00
Camera Maintenance (provides maintenance from Month 12 to 60)	£9,240.00
Additional Contract Requirements per annum (Piezo sensors etc.)	£4,000.00
Sub Total	£17,340.00
Total Cost	£91,270.00

Table 2- Option 2: Spot Camera Installation Costs

Installation Costs (Approximate Costs)	Physical Measure Installation
2 x Raised Table Installation, including Red Tech (15mm)	£16,000.00
1 x Road Hump	£1,600.00
1 x Mini Roundabout alterations	£3,000.00
1 x Chicane	£3,000.00
Haunching	£12,500.00
Drainage	£3,000.00
Road Markings and Signage	£2,000.00
Amey Design Fee	£5,000.00
Sub Total	£46,100.00
Contingencies	£1,600.00
TM requirements	
4 days road closure	£5,200.00
2 days - 2 way-lights	£220.00
1 day - 3 way-lights	£110.00
Sub Total	£5,530.00
Total Cost	£53,230.00

Table 3- Option 3: Physical Measure Installation Costs

3. Results

The cost of installing an average speed camera solution, shown in Table 1, is approximately £70,000. This figure includes the purchase of the camera outstations, installation equipment, a design fee and ancillary works whilst not exhaustive will include items such as trenching and electrical requirements. The ancillary works cost is based on a comparable site in Stewartby Way, Stewartby (see Appendix 1). Table 1 also shows an additional requirement for the calibration and maintenance of camera equipment for an average speed camera system. Over a five year period the cost is approximately £46,000.

In total to build and maintain average speed camera traffic calming measures over five years would cost £116,000.

The cost analysis in Table 2 shows that an installation cost for the spot speed camera system can be delivered for around £74,000. This figure includes the purchase of a single digital camera, installation of the camera housing unit along with a design fee and ancillary works.

Table 2 also shows an additional requirement for the calibration and maintenance of camera equipment. The associated costs are approximately £17,000.

In total to build and maintain a spot speed camera traffic calming measure would require an outlay of in the region of £91,000.

The breakdown of costs in Table 3 shows that an (indicative) estimate for installing a physical traffic calming measure of £53,000.

4. Advantages of Average Speed Cameras

The operating principle of the average speed camera solution is based on cameras being constructed into a network allowing a vehicle to enter and exit at any point in the network. By identifying all vehicles as they enter the enforcement zone an average speed is calculated against the exact distance travelled within the zone using Automatic Number Plate Recognition (ANPR).

The approach of creating a link between cameras allows for a larger part of the network to be enforced. It can effectively monitor speeds over a far greater distance than a spot camera and is more effective in ‘averaging’ down speeds. This system does not create a ‘slow-down- speed-up’ scenario. It can be beneficial in reducing average speeds at optimum positions and over a longer link.

The system is less conspicuous than its spot camera counterpart. The camera mounting is higher and considerably smaller in size when compared with the spot camera; it is less intrusive when positioned close to properties and/or in areas of conservation.

5. Disadvantages of Average Speed Cameras

Vehicles travelling over a greater distance will be lost through natural dispersion. The loss of vehicles to feeder routes is an issue for average speed cameras and as such this approach may prove counterproductive in the longer term.

An average speed camera solution uses lighting columns at the capture zone, not an infra-red technique. The effect of lighting emission on a local environment such as a small village with part-night lighting systems, can be contentious.

The installation process is particularly long. As an example the process from initiation to evidential pack submission to the Police can take up to 39 weeks. In essence the process takes a considerable amount of design/project management time to ensure delivery.

6. Advantages of Spot Cameras

A spot camera is bi-directional and can be installed at a specific location encouraging a reduction in vehicle speeds.

The installation of the spot camera can take considerably less time to install. Effectively, a site visit, marking out of camera, a feasibility assessment and agreement on site location can be agreed in a single site visit. As a result a crew can be organised and operational promptly. The majority of works can be complete quickly and Amey is only required to feed power to the site. Having a focal point for all works can be instrumental in the delivery of sites.

7. Disadvantages of Spot Cameras

Spot camera solutions do not encourage any reduction in speeds away from camera locations and therefore do not measure speeds over a greater distance.

Spot camera solutions do not encourage any reduction in speeds away from camera locations and therefore do not capture over a greater distance. As can be seen from the breakdown of speed camera costs, as outlined in table 1 and 2, they can be an expensive option whether that is up-front costs or yearly maintenance and operational costs.

Cameras are very expensive and the budget for this scheme is insufficient for their implementation or the ongoing maintenance and operational costs of speed cameras. More importantly, Bedford Road does not have a history of injury incidents and does not meet the requirements for the implementation of safety cameras.

8. Advantages of Traffic calming measures

Physical traffic calming measures in Bedford Road, Houghton Conquest are shown on *Drawing Number 806906-001-01 Revision A- General Arrangement*; they constitute two raised tables, a road hump, a chicane system and mini-roundabout markings.

The scheme as designed and consulted upon will improve road safety for all road users, but in particular pedestrians, cyclists and other vulnerable road users in Blunham. The traffic calming scheme was formally advertised by public notice during December 2014 and January 2015. Residents living alongside this length of road were individually consulted.

The design will importantly, significantly increase the safety of pupils on the route to and from schools in the area. The proposal will support and encourage sustainable travel in line with approved Central Bedfordshire Council policy.

It is important to note that this scheme had been developed in line and in accord with Central Bedfordshire Council policies and priorities as outlined in:-

Local Transport Plan 2011 - 2026 (Adopted April 1st, 2011)

h) Appendix E Walking Strategy

i) Appendix F Cycling Strategy

j) Appendix X Transport Asset Management Plan

k) Local Area Transport Plan - Haynes and Old Warden (including Houghton Conquest)
(Adopted April 1st, 2013)

Quantification of speeds along Bedford Road, Houghton Conquest show why it is pivotal that a scheme has been developed to address issues related to speeding vehicles and road safety concerns. The combined average speed of northbound and southbound vehicles along Bedford Road was recorded as 33.94mph and the 85th percentile speeds were 39.18mph with 69% of vehicles over the 30mph speed limit. There are a number of environmental factors that may have contributed to the recorded speeds. Bedford Road is one of the main routes into Houghton Conquest. The road is relatively straight, with properties generally set back from the road, particularly at its north-west end. As a result these factors tend to encourage higher traffic speeds.

Road humps are acknowledged to be an effective method of reducing traffic speeds. The majority of drivers will slow down for road humps and most will maintain a lower mean speed as the hump has been placed at reasonable intervals to other traffic calming measures. The chicane is also an effective slowing feature, and has been carefully considered in this design process. The cost estimate has also taken allowance of the hunching required for the road as it is in poor condition and requires along a long stretch of road to bring it back up to standard.

9. Disadvantages of the traffic calming measures

Raised traffic calming features will inevitably create some noise, vibration and disruption to adjacent residents, particularly given the position of the raised tables. Chicanes can also be problematic as approaching vehicles may accelerate through the feature to avoid the need to give way to opposing traffic. By their very nature, chicanes will also prevent parking in close proximity so are not popular in locations where there is a high level of on-street parking.

Conclusion

This assessment report has been produced to support the proposed traffic calming measures along Bedford Road, Houghton Conquest. The assessment has considered three options; the average speed camera solution, the static camera solution and physical traffic calming measures. The physical installation of traffic calming measures will provide a cost effective traffic calming scheme and will reduce the speed of vehicles travelling along Bedford Road.

10. Recommendation

The main recommendation is that the introduction of traffic calming measures already designed and consulted upon is the preferred option as it will deliver an overall gain that is two-fold. Firstly, the traffic calming will reduce speeds along Bedford Road and secondly, the scheme will be delivered w

APPENDIX 1

Maintenance is covered under revenue stream per year. Please bear in mind that a new camera comes with a 12 month warranty, and 12 months of calibration certificate. Therefore the first paid for Maintenance Contract starts on the first day of year 2 and goes through to the last day of year 2. Therefore 5 years is achieved with 4 Maintenance Contracts, likewise with calibration certificates. A new camera comes with one year of calibration. Four additional calibrations provide cover of 60 months or 5 years.

The Maintenance Contract covers only the D-CAM P Speed camera, not the TBOS/TVM pair of servers and the Shuttle PC and Courtview PC (Both Dell laptops). The above price is not based on individual camera sites; therefore things like piezo sensors, auxiliary flash, power supply module, camera post, roadside router or electrical feeder pillar are not covered by a maintenance contract. These costs are covered under a separate camera maintenance contract.

Average Speed Camera Notes

Please note that the installation of cameras does not include traffic management costs, installation of a feeder pillar nor the lighting column required to light up the capture zone of the cameras. The Home Office approval determines that the camera and the lighting column is 16.5m apart meaning trenching/ducting and pulling the cables through is more expensive under this option. They are required to trench/duct in most cases 3m between the camera and feeder pillar.

The equipment is covered by a standard 12 months onsite warranty. Warranty commences at time of installation.

Spot Speed Camera Notes

Please note that the installation of spot cameras covers traffic management costs, installation of a feeder pillar, camera and auxiliary flash post as well as covering excavation and cable feed. Amey are only required to trench and feed a cable from a power source to their feeder pillar.

This outlines why the installation of cameras and ancillary works vary considerably between both options.

Stewartby

Install/Commissioning = £17000 (2 live)
Cameras (Outstation) = £40546 (2 live)
Civils/TM/Electrical = £8500
Warranty for 12 months = £9048 (2 live cameras)
Warranty for Back Office = £2500
Amey Design Fee = £3000

Total = £80594