

Consultation with Christleton residents on traffic issues

An invitation to all Christleton residents. This document is intended to help in preparing a village questionnaire on traffic issues so that we can develop a Village Traffic Plan.

Residents are invited to comment on any aspect of it with a view to improving its content, presentation, etc. Contributions can be sent via email or telephone. Contact details are on the Traffic Group webpage.

Section Contents of Consultation document

- | | |
|---|---|
| 1 | Background to the consultation |
| 2 | The process of consultation |
| 3 | Outcomes from the November 2007 meeting |
| 4 | Parking in the village |
| 5 | Traffic density and speed |
| 6 | What should guide solutions? |

Appendix A Summary of issues to be addressed by residents' questionnaire

Appendix B Overview of road system and associated problems

Appendix C What does the Department for Transport have to say relevant to our problems?

1. Background to the consultation

A meeting on traffic issues was held in November 2007 as a result of widening village interest following vehicle speed and density surveys and use of the radar gun equipment by Plough Lane residents. The scope of the initiative has been restricted to the conservation area, its inter-connecting roads and the five feeder roads into the village. Various concerns about traffic have been raised at different times over recent years. Complaints have been made separately about parking, vehicle density and speed to the Parish Council and City and County Councillors. As a result individual topics have been dealt with on a separate basis. For example, two 30mph entry points to the village have been reinforced by prominent road markings and traffic lights installed at Rowton Bridge. However, the general view of residents we have spoken to is that problems have continued to get worse. People were concerned about vehicle speed and a perceived increase in traffic density; especially on the 'rat runs' through the village. People were concerned by the impact of large and heavy vehicles on our village roads, which were described by one resident as 'built for hay-wains'. Parking around the schools and in the centre of the village obstructed traffic flow, caused congestion and was said to 'make a mockery' of efforts to improve the appearance of the village and to promote the quality of village life.

A meeting was held in the High School on 13 November which was attended by 94 people. Invitations were issued to a total of 140 houses judged to be immediately affected by traffic issues in the chosen area. The meeting was designed to be the launch of a wider consultation – not only with those who were unable to attend but via the website or other means, with all residents interested in influencing the impact of traffic on our village environment. The meeting tackled the ways in which different aspects of road usage interacted with each other. A plan for overall improvement must bring all aspects and all interested parties together.

2. The process of consultation

The meeting organisers proposed that sufficient time should be taken to consult widely with Christleton residents and that it was important to address all traffic concerns because acting on one can affect others. The organisers believe these proposals were widely supported.

This document is now available to all Christleton residents on the website www.christleton.org and its existence will be advertised in the Parish and A41 magazines. As we have no resources we will have to ask for a small contribution to cover the cost of producing any paper copies requested.

Christleton residents are asked to respond by letting us know of any concerns, issues or possible solutions regarding traffic in the village which are not listed in Appendix A. Please also let us know if you have any comments on the discussion of issues in the rest of the document.

The next step will be to produce a questionnaire to test residents' opinions on the importance of these issues and how acceptable any measures to control problems would be. We would like to start preparing the questionnaire in March so please let us have your comments as soon as possible. At all times during the widening consultation process we will take account of further comments and suggestions offered by residents and will seek to improve the document.

3. Outcomes from the Meeting

There was strong support for:

- reducing the volume of traffic using the village roads as through routes
- making use of physical deterrents to deter traffic not essential to village life
- eliminating the widespread abuse of speed limits in the village
- accepting that physical calming methods to control speeding, e.g. chicanes and other roadway modifications were agreeable to residents (provided they were sympathetically designed)
- exercising control over access to village roads by heavy and large vehicles which are not essential to village life

Suggestions were made regarding:

- closing off or restricting access routes, particularly the junction of Rowton Bridge Road with the A41
- revising the position of 30mph roundels
- lowering some speed limits to 20mph

What to do about parking problems in the village was very much less clear. This is an example where there are multiple interactions: convenience for residents, village appearance, deterrence for traffic flows, the effect on traffic speeds, problems of enforcement, and so on. We are relying on the wider consultation to help clarify residents' priorities.

4. Parking in the Village

Parking is a distinctive issue which strongly colours discussion of road use and abuse in Christleton.

Opinions on the need or desirability of change vary widely. Any initiatives to impose control will require wide understanding and support by village residents.

Parking in the village centre

A village initiative to discuss parking was organised by the Parish Council (in 2004) in response to businesses in the village centre fearing customers could not park near them. Residents decided that formal restrictions would not be sought in the village centre, but staff of businesses were asked to improve their parking practices and to address the needs of their clients.

Residents were highly sceptical of assurances by the Deva Bridge Club that their members did not contribute to the problem, and people who attended the Nov 07 meeting were equally unconvinced.

There is a balance to be struck when thinking about what should be done. If parking were to be eliminated by any means the easing of traffic flow along Village Road would increase the attraction of the route for 'rat runs' through the village. It is possible that road 'treatments' could limit vehicle speeds in the village centre, which would otherwise increase, but those would inevitably change the appearance and character of the area.

It is considered important that local residents should have priority for village resources and that the life of the village, including businesses, should be enhanced.

Formal parking restrictions would be ineffective unless rigorously enforced. A benefit would be in enabling Police officers to take action in the event of obstruction. They may do so now but officers have to judge there is obstruction rather than simply pursuing the breach of a regulation.

Parking around the schools

Parking by vehicles picking pupils up in the afternoon has a major impact on the village. Morning dropping-off tends to be done from vehicles which stop briefly and move away. In contrast, vehicles picking pupils up start occupying the 'pole positions' near the school gates well before school ends and cause major congestion in Quarry Lane, Plough Lane and Village Road.

Residents complain of restricted access to their properties and even of driveways being blocked.

Parking causes concern when interacting with heavy traffic flows. The morning and evening tidal 'rat-running' creates severe congestion with village centre parking. Traffic generated by the schools, particularly the flows away from the schools in the afternoon, interacts with parking to cause congestion throughout the village. There are problems with buses having to negotiate the village centre where it is normal for the road width to be reduced to one lane – for the length of the double bend from Birch Heath Lane to Woodfields.

Efforts are being made to encourage pupils to walk or cycle to school. The Parish Council is working with the High School on measures to reduce the need to park in close proximity to the school.

However, the view was expressed at the Nov 07 meeting that whatever is done to reduce parking near the school there will always be a significant number of parents who take advantage of any cleared space to park for their own convenience. Formal restrictions on parking would only be effective if remorselessly enforced. This equally applies to control of parking in the village centre. The reduction in drivers who use the village as a through route at the times of congestion does highlight the deterrent effect this has, and the potential for people to find alternative routes if they are sufficiently restricted.

Overview on Parking

There is no clear consensus yet on what the community wishes to achieve regarding parking in the village, and what, if anything, should be done.

Some residents wish to see parking on the roads eliminated for aesthetic reasons: it spoils the appearance of the village. Others wish to see parking reduced in some way so that places are then free for them to park for short periods outside village businesses, or even for long periods outside their homes.

Examples of inconsiderate parking which restrict access to residents' property can be resolved with existing Police powers.

Some residents have expressed the view that whatever efforts are made to find alternative sites for pupil-ferrying parents or shoppers using village businesses there will always be a core body of drivers who will take up the convenience of the space created close to the schools or shops.

The only effective control of parking in the village would be by regulations being made, roads marked and continuous enforcement. The majority of residents who have expressed their opinion on that option are against that approach.

Parking and Traffic interaction

Other concerns regarding parking arise from the inevitable conflict between parked vehicles and the flow of traffic. Perhaps, therefore, the attack on the issue should be focused on reducing traffic which is not generated by residents.

Improvement to congestion would come by deterring through flows of traffic not essential to the village and by separating school-leaving traffic from areas restricted by parking.

5. Traffic density and speed

Road usage by residents is overwhelmed by the volume of two 'tidal rat-runs' through the village. One flow is to and from the A41 – A51 which is popular as a means of by-passing the 'Sainsbury's roundabout' and ring road traffic light junctions. This flow affects Little Heath Road and Rowton Bridge Road. The second is between Chester and the villages to the South East of Christleton which affects Pepper Street and Plough Lane.

Both channel traffic through the village centre – or via Quarry Lane at times of known congestion. Both flows result from the perception of a convenient route, but in both cases are provided for by other roads which are more suited to the volumes of traffic than the traditional village centre.

Traffic speed

Reliable anecdotal evidence for inappropriate vehicle speeds has been offered for all feeder roads into the village and for the interconnecting roads: Village Road and Quarry Lane. The behaviour of drivers strongly suggests the effect of 'compensatory speeding'. Drivers having experienced delays in the village centre appear to abuse the out-going village roads by speeding to compensate for the perceived loss of time. The installation of any traffic calming measures can only be done after a formal confirmation of problems by the County Highways department. The case for a formal survey would be assisted by any measurements resident groups can make. Use of the radar equipment or Speed Indicating Device (SID) by residents will build the case by collection of measured data.

Speed measurements in Plough Lane

The only substantial set of statistical data has been collected for Plough Lane. Measurements made by residents indicate a mean speed of 36mph and 15% of vehicles exceed 42mph (the '85-percentile speed') for most day-time periods. This compares with the Department for Transport (DfT) expectation that mean speed should be at or below the posted speed limit (30mph) – see Appendix C. The lane is a bus route. Observations show 50% of buses exceed the speed limit when the road is clear enough for them to do so. This road, in common with most routes radiating from the school sites, is an important walking and cycling route for pupils. It is a County-recommended cycle route and is used at all times by cyclists and walkers. At its narrowest points the lane is not wide enough for a car to pass the service buses which use this route without careful manoeuvring at slow speed, sometimes requiring vehicles to mount the pavement. The pavement width at several points is only 1m or less. The measured vehicle speeds are clearly inappropriate for the characteristics of the lane and measures are required to regulate these at the 30mph gateway and within the length of the lane.

Other roads

Measurement of traffic speed and density will be required to support anecdotal evidence before any case can be made for traffic calming measures. Residents who wish to add weight to claims for attention can be trained in the use of the radar speed gun and the vehicle activated speed indicating device (SID). Both can be used to measure the severity of the local problem.

6. What should guide solutions?

To guide our thinking about the resolution of these problems it may be useful to state some principles to be followed, for example:

- The statutory restrictions in place now regarding speed limits and bridge use are sound if observed
- Change of driver behaviour can be brought about by enforcement of prevailing rules, altering the environment to make poor behaviour more difficult and demonstrating to drivers that residents are endangered and offended by their actions.
- The narrow and rural roads of the village are adequate for residents' needs
- The road system is not adequate or appropriate for through flows for which less restricted road routes are available
- We wish to promote village life and activity
- We wish to retain as far as possible the present appearance of the village

Coming closer to the specific circumstances in the village, the following concepts might assist in making choices:

- Changes in the pattern of parking will inevitably cause changes in traffic flow
- The elimination of village centre parking would undoubtedly increase speed and make the village more attractive as a short-cut route – unless traffic control measures are introduced
- Parking generated by the personal activities of residents in the village centre would be acceptable to the local community
- Parking associated with the presence of schools in the village needs to be addressed in its own right by developing school practices, policies and physical resources.
- It has been suggested that whatever arrangements are made for reducing the need to park at the school entrance, there will always be some drivers who will take advantage of the cleared space as convenient waiting areas

- Restrictions on parking in the vicinity of schools or in the village centre will not work unless intensively enforced
- In a situation when 50% of drivers flout existing speed limits there is little benefit in further reducing these limits as a first step
- Observations suggest that the majority of drivers who speed in the village are not residents and are using the village as a convenient through route
- The priority is to deter traffic which has no business in the village
- The speed of all traffic in the village should be regulated by traffic calming measures
- Residents would accept the use of traffic calming or regulation if measures proved effective with respect to through traffic
- At the moment there are no indications to drivers of through traffic that Christleton residents object to speeding, anti-social parking or other abuses.

Appendix A

Summary of issues and proposals received

The following items are the issues and proposals put forward at the meeting in November 2007 together with those offered up to the date of publishing on the website. They will be used to draw up the questionnaire for residents, which is the proposed next step in the consultation process.

If you wish to add to the list of issues, proposals or to the general comments please do so by the end of March 2008. See the start of the main document for the means to send your comments to the authors.

General village issues

Issues

Through traffic– tidal ‘rat-runs’

Speed generally – village used as through route

Vehicle size – 60 seat coaches to and from High School – articulated vehicles using A41/A51 ‘rat-run’

Parking throughout village

Proposals from meeting

Control all 5 entrances to village using chicanes
 Selective closure of roads
 One way systems
 One way at key times of the day
 Close Rowton Bridge from 8 – 10am
 No right turn into village off A41 from south
 Lower speed in central village
 Cycle path needed through village
 Bus and coach size should be restricted
 Heavy goods not allowed through
 Introduce ‘Resident Parking’ areas in the village
 Build a village car park

General considerations Businesses and activities in village centre generate need for parking – we do want the village to thrive and be active. One-way systems create speed and make difficulties for residents. Care not to move problems to other places Interaction between areas and issues must be thought through

Pepper Street

Issues

Straight stretch from Bridge to centre of village induces some to speed

Proposals from meeting

Lumps, bumps, chicanes Reduction in current speed limit Resurface road

General considerations Traffic density – No real problem Parking – Generally low priority with occasional exceptions at Church and Parish Hall

Little Heath Road

Issues

Top priority in Little Heath Road linked with volume

– school runs and rat runs

– enormous buses on roads built for hay wains

– road inadequate for 60 seat buses

Excessive speed approaching village at Pit

Proposals from meeting

Reduce attractiveness as rat-run by using chicanes Calming measures are needed

-preferably chicanes

Reduce speed to 20mph

General considerations This series of bends has little impact on speed. Siting of chicanes would be important.

Birch Heath Lane

Issues

Traffic speed

– speeding coming towards village centre on the bend from The Pit

– vehicles take no notice of speed limit and accelerate as soon as clear of parking

– vehicles don't slow down on the way in

Parking – generally never-ending in area nearest village – permanent parking outside the Home- traffic turning in private driveways

Proposals from meeting

Traffic calming at village entrances

Sleeping policemen

General considerations Agree village gateways can be made decorative features

Plough Lane

Issues

Not just (individual) very high speed but general high speed Buses' speed especially at night Excessive speed at Plough Lane/Village Road junction

Volume of traffic

– morning and evening 'rat-runs'/non-local traffic – school traffic

Pedestrian and cycling risks Cyclists on road/on pavement Street lighting

Parking in lane

– congestion around school gate
– thoughtless and careless parking at the cross-roads
– buses can't get out of school
Construction traffic blocking lane Parking by cottages

Type of vehicles – large vehicles in narrow lane

Proposals from meeting

Traffic calming – chicanes at 30mph entry and mid-lane – speed ramps/cushions – 30 mph flasher – narrow roads in sections/give way stretches – 20 mph limit (round schools) – fixed speed camera Regular monitoring (by Police) Enforcement of speed limit Lobby bus company Design traffic calming to control bus speed Re-profile turn into Plough Lane from Village Road Stop traffic using village as cut through Restrict to one lane at Park Fields Farm to – reinforce traffic calming – widen path for prams and disability vehicles – stop passing vehicles mounting pavement Need cycle path Stop through traffic of heavy goods

General considerations Young drivers – rushing back and forward from school. People rushing to get to night school (and gym). Road widened so easier to speed – hedge taken out Pavement has given drivers security – a comfort zone People used it as a short cut during road works – then keep using it 60 mph limit not appropriate from cross-roads, cf A41 at 40 mph Speed measurements in the lane show serious departure from the speed limit and make a strong case for traffic calming

Rowton Bridge Road

Issues

Excessive speed associated with through traffic

Dangers to pedestrians:

– no/limited pavement areas
– danger spots at hump-back bridge and blind spots near Plough Lane
– increasing numbers of cars etc.

Danger to cycles ridden by children Traffic volume due to 'rat-run' between A41 and A51 Difficulty for residents getting out of driveways Residents parking near bridge creates dangers High school parents park/drop children off, creating additional

Proposals from meeting

Priority narrowing/chicanes changing priorities along the route: this might also provide some pavement space Create a bend in road using open area at Badger Close 20 mph restrictions throughout the village Put a pavement in Stop rat run – close Rowton Bridge from 8 – 10am No right turn into village off A41 coming into Chester Close junction with A41 Clarify weight and width restrictions before vehicles enter village Remove route from sat-nav systems

hazards School -related traffic at peak school times Problems with large, overweight vehicles attempting to use Rowton Bridge

General considerations Traffic lights have reduced number of minor shunts at the bridges Police and Ambulance traffic has increased

Village Road

Issues

Parking on Village Road and around village green

– parking on pavement and vehicles travelling on the pavement are a danger to children walking to/from school. Bridge club parking is blocking residents' drives

Speed of traffic

Traffic density

– traffic surging at school start and finish time
– through traffic: A41 to A51 and Chester to SE

Pedestrian safety

– people from old peoples' home are in danger
– driving on kerbs in Village Road

Proposals from meeting

Limit parking time in village Ban parking, other than outside the Post Office for customers, from the Green to the High School Introduce parking restrictions in area around village green 30 minutes free parking 8am – 6pm 15 min parking (near Post Office) Single yellow lines (near Institute/Bridge Club) Parking places enforced Speed bumps on bends by Pit and Birch Heath Lane Reduction of traffic speed by 20 mph in village 20mph signs and flashers Cobblestones – suitable for conservation area Speed bumps Introduce 'traffic calming' More active speed checking Discourage with traffic calming One way system Separate school traffic from areas affected by parking, e.g. school car park with new access from Birch Heath Lane

General considerations Businesses and activities in village centre generate need for parking – we do want the village to thrive and be active More busing of school children to High School and sports facilities The interaction of parking with heavy traffic flows causes congestion – particularly at school finish times

High School

Issues

Excessive parking in front of school gates and throughout the village at 'school surge' times – also for night school and school evening events

Driveways blocked when dropping off/collecting children

Proposals from meeting

School should encourage bikes and walking Pupils should be on buses & not in cars Use of Park & Ride as possible solution Introduce parking restrictions in area around school Bollards on both sides of school gate Park and walk system Off load children at Trooper on A41 Reduce school traffic by having satellite drop-off/pick up points, e.g. Park & Ride, Trooper Bus

Parking on pavement at school drop off/pick up – in school gates/yellow zig-zags Very large coaches used for pupil transfer

School cyclists take dangerous risks eg, riding at speed on pavements, riding in groups across the road

pupils out to satellite pick-up points Use field by Law College or by Cheshire Cat Restrict number of cars coming in with school children Designate in/out school gates Provide parking at school for drop off or one-way system – through to Birch Heath Stop parking round school gate so buses can get past

General considerations More sixth formers/teenagers with cars

Primary School

Issues

Proposals from meeting

Another toast-rack at the Primary School Get Primary School involved in making road speed signs

Quarry Lane

Issues

Proposals from meeting

Speeding

– taxis notable – 50 plus –especially at night

One way system in Quarry Lane – along Faulkner's Lane, from Pepper Street direction to Quarry Lane

Traffic volume – School traffic

Parking – vehicles abandoned during day in 'Toast rack' and Woodfields, then backs up onto Quarry Lane pavement

General considerations Traffic diverts into Quarry Lane to avoid congestion/parking in the village centre Vehicles and property damaged – bus incident **Action proposals** Get costs of various measures and potential initiatives Find out what other villages do Publicise web address for documents in A41 & Parish Magazines Contributory funding for any of these/reasonable suggestions – e.g. speed gun Approach the appropriate authorities Consider this as part of the overall solutions, e.g. speed limits, chicanes, etc. Traffic calming measures are inappropriate due to noise & environmental concerns

Appendix B

Overview of road system and associated problems

The road system we are looking at consists of the five entry roads into the village and the two main interconnecting roads: Village Road and Quarry Lane.

Pepper Street

- The canal bridge provides some deterrent to large vehicles
- Christleton Law College generates a moderate amount of traffic at set times which divides between routes into the village and towards Chester
- The down-slope from the bridge and the incline towards the village encourages vehicles to gather speed
- The approach to the Village Green is sometimes affected by parked vehicles, particularly when Church or Parish Hall events take place.
- Concerns raised about vehicles speeding towards the village

Little Heath Road

- Vehicles leaving the village are regulated by the series of blind bends
- Vehicles approaching the village experience a short 40mph stretch before entering the 30mph zone
- The openness of the Pit area gives an impression of space to drivers
- The first sharp bend to the right has been re-profiled recently as part of the revised entry to Little Mere housing. It presents the appearance of a road which contrasts with the sharpness of the turn and subsequent narrowness
- Bends inwards towards the village are blind and inappropriate speed results in close encounters between vehicles passing at these points
- Vehicles speed past the Pit and have on several occasions mis-judged the first bend. Several have collided with garden walls having crossed the pavement
- The Lane is the entry from the North which provides no discouragement to large vehicles which then block opposing traffic in the built-up village
- Peak hour flows increased as a result of diversions for A41 road works and have not abated much as drivers avoid peak-time congestion on the Chester Ring Road
- Satellite navigation systems encourage drivers to use this route between A41/A51. The systems do not indicate restrictions to road space and usage
- These last two issues affect Village Road and Rowton Bridge Road equally

Birch Heath Lane

- Road width is reduced at the Village Green end by persistent and day-long parking
- The speed limit is routinely ignored by outward traffic once clear of the parked cars
- Despite additional road markings the 30mph limit is frequently flouted by inward traffic despite the narrow and twisting nature of the approach lane

Plough Lane

- The High School entrance has a major influence on the village end of the Lane
- Vehicles dropping pupils off create traffic obstructions during the morning peak flow, but generally do not remain stationary for long periods
- Vehicles collecting pupils in the afternoon cause severe obstruction and for a prolonged period. Drivers seeking 'pole position' at the school entrance start parking long before pupils leave
- The number of vehicles waiting reduce the width available to that of a medium sized vehicle – for a sufficient length of road to cause frequent occasions when traffic is

brought to a stand-still by large vehicles or difficulties in resolving the priority for opposing streams

- Towards the Brown Heath Road cross-roads the recently installed foot-path has replaced the high hedge on the inside of a previously blind bend. The clearer view encourages drivers to accelerate further before the 30mph de-restriction
- The Lane carries substantial flows of vehicles at peak morning and evening periods
- The Lane is an important walking and cycling route for High School pupils living in the Waverton direction. At the narrowest part of the Lane the footpath has stretches which are less than 1m wide
- Cars are frequently parked on the footpath in this part of the Lane which forces walkers, prams, small children, etc to divert onto the roadway
- There is a general flouting of the 30mph speed limit by drivers at all times of the day and on all days of the week
- At any time of day half of the vehicles using the Lane exceed 35mph – ie are liable to prosecution for speeding
- Driver discipline is shocking at the busiest times. Aggressive tail-gating and attempts to overtake drivers observing the speed limit are common, despite the narrowness of the road
- Vehicles parked fully on the road act as effective restraints to speeding
- Impact damage from passing vehicles is a frequent occurrence
- At least one parked vehicle has been completely written off in the last few years following a collision
- The turn-off from Village Road into Plough Lane is very generously profiled, leading to vehicles taking the turn at speed. Vehicles regularly lose control on this turn: one serious accident has occurred when a vehicle rolled over and destroyed a length of hedge
- The road markings intended to reinforce the entry into the 30mph speed limit appeared to have no impact on vehicle speed

Rowton Bridge Road

- Rowton Bridge Road carries the traffic which uses the village as a route from the A41/A51 (See comments for Little Heath Road)
- Rowton Bridge has weight and width restrictions
- Large vehicles approaching Rowton Bridge Road from Village Road have received no prior warning of restrictions on the bridge and have no indication of which way to go to avoid it
- Placing traffic lights on the bridge has achieved a major reduction in accidents and has improved pedestrian safety
- The traffic lights may have encouraged use of the road as a short-cut by regulating traffic flow: by reducing the hazard from using the hump-back bridge with steep approach, blind to oncoming traffic
- The road is straight and despite the narrowness before the Quarry Lane junction vehicles are driven at speeds excessive for the residential nature of the road
- Apart from short lengths on either side of Rowton Bridge there is no pavement
- The road is another important walking/cycling route for High School pupils
- Plans are being made to modify the road at Quarry Lane junction. The Parish Council has requested that this should form a restriction to traffic flow at this point

Village Road

- From the village centre Village Road has a closely built-up double bend on which are located the village commercial premises, the Ring o' Bells, Christleton Institute, Deva Bridge Club and the nearby dental practice
- All the above generate vehicle parking which reduces the road to one carriageway for most of the week
- During Bridge Club sessions this parking extends around both bends in the road
- Some residents in the village centre have no off-road garaging and routinely leave their vehicles on the road
- All traffic (including the A41/A51 'rat-run' traffic) therefore has to negotiate a blind, single carriageway bend for most of the week
- Traffic gridlocks are routinely relieved by vehicles mounting the opposite pavement to allow passing when neither driver could see the other when entering the single clear lane
- Large vehicles have to negotiate these constraints on a daily basis: scheduled service buses, school buses and large coaches which bring school parties to use the High School and sports facilities
- The passage of such vehicles causes much congestion and manoeuvring with narrow clearances – inevitably vehicles are regularly damaged
- Once clear of the parking congestion many South-bound vehicles accelerate rapidly. The open grassed area appears to encourage speeding towards the Quarry Lane junction: an inappropriately fast approach to the narrow entry to Rowton Bridge Road and the broad turn into Plough Lane

Quarry Lane

- Quarry Lane is frequently used by through traffic to by-pass the village centre at known times of congestion
- The Primary School generates similar parking congestion to the High School: short-lived drop-offs in the morning, but a protracted period of solidly parked obstruction of one carriageway in the afternoon
- The Primary School traffic moving away then interacts with vehicles parking up for High School pupil collection

Appendix C

What does the Department for Transport (DfT) have to say which is relevant to our problems?

DfT quotations are in italics

Our comments on the relevance to Christleton have bullet points

Efforts should therefore be made to promote use of more suitable routes for through traffic and to manage the speed of traffic requiring access to residential streets using traffic calming and associated techniques (see Traffic Advisory Leaflet 03/90; DoT, 1990).

- This statement seems to sum up the objectives for Christleton

Successful 20 mph zones and 20 mph speed limits should be generally self-enforcing. Traffic authorities should take account of the level of police enforcement required before installing either of these measures. 20 mph speed limits are unlikely to be complied with on

roads where vehicle speeds are substantially higher than this and, unless such limits are accompanied by the introduction of traffic calming measures, police forces may find it difficult to routinely enforce the 20 mph limit. Traffic Advisory Leaflet 09/99 (20 mph Speed Limits and Zones) Research into 20 mph speed limits carried out by TRL (Mackie, 1998) showed that, where speed limits alone were introduced, reductions of only about 2 mph in 'before' speeds were achieved. 20 mph speed limits are, therefore, only suitable in areas where vehicle speeds are already low (the Department would suggest where mean vehicle speeds are 24 mph or below), or where additional traffic calming measures are planned as part of the strategy.

- 20mph zones are probably not relevant to Christleton's problems

Traffic calming involves the installation of proven physical or psychological measures to encourage lower traffic speeds. There are many measures available to traffic authorities to help them reduce vehicle speeds and ensure compliance with the speed limit in force.

... the most popular and effective measures:

road humps

road narrowing measures

gateways

road markings

rumble devices.

- Psychological measures also include the 'de-cluttering' of village areas and the deliberate blurring of the distinction between road and pedestrian use; the intention being to raise drivers' level of attention. Potentially relevant to the village centre.

The speed limit on single carriageway rural roads should take into account traffic and road user mix, the road's geometry and general characteristics, its surroundings, and the potential safety and environmental impacts. It is recommended that the minimum length of a village speed limit should be at least 600 metres. Speed can also be a major factor in the severance of local communities from essential facilities and lead to a reduced quality of life. Traffic authorities should particularly intervene on roads where there is a case for encouraging use by, or safeguarding the needs of, vulnerable road users.

- Walking and cycling by pupils at village schools, as well as by an increasing number of residents, are strong arguments for intervention.

Speed limits should be considered as only one part of rural safety management, and what the road looks like to the road users, the road function, traffic mix, and road and rural characteristics should be taken into account. In rural areas every effort should be made to achieve an appropriate balance between speeds, speed limits, road function and design, the differing needs of road users, and other characteristics. This balance may be delivered by introducing one or more speed management measures in conjunction with the new speed limits and/or as part of an overall route safety strategy. The aim should be to align the local speed limit so that the ... mean speed driven on the road is at or below the new posted speed limit for that road. Mean speed should be used for the assessment. For the majority of roads there is a consistent relationship between mean speed and 85th percentile speed. Where this is not the case, it will usually indicate that drivers have difficulty in deciding the appropriate speed for the road, suggesting that a better match between road design and speed limit is required. The aim should be to align the speed limit to the prevailing conditions, and all vehicles moving at speeds as close to the posted speed limit as

possible. For mean speeds to be acceptable, they should be no higher than the posted limit after it has been implemented. Research shows that, for a typical distribution of vehicle speeds on single carriageway rural roads, the 85th percentile speed is about 6 mph above the mean speed for roads with a 50 mph limit, and about 8 mph above mean speed on roads with a 60 mph limit.

- The expectation for the level of speed emphasises the discrepancy in Plough Lane where mean speeds of 36mph and 85-percentile speeds of 42mph have been measured.
- The ability to make reference to hard statistical data underlines the importance of obtaining it for areas considered anecdotally to be threatened.

The (speed limit roundel) sign should be located as near as practicable to the start of the development, so that drivers see housing at the same time as the signs, reinforcing the visual message for reduced speed.

- The suggestion to move the 30mph sign in Plough Lane to the junction with Brown Heath Road is probably not appropriate for this reason

... lower speed limits on their own without supporting physical measures, driver information and publicity or other measures will not necessarily change driver behaviour and therefore will result in substantial numbers of drivers continuing to travel at unacceptable speeds.

- 'Supporting physical measures' look to be the key to the required improvements

Chicanes (Department for Transport leaflet – Chicane schemes) Horizontal deflections have mainly been installed to influence vehicle speeds, though not always successfully. Chicanes have been effective in reducing vehicle speeds, as long as large vehicles such as articulated lorries do not have to be accommodated. Where this occurs the stagger length may need to be so long that car drivers can adopt a relatively straight line through the chicane, and therefore speeds are not reduced. (The trial) showed that installing speed cushions on the approach to a chicane would partially compensate for longer stagger lengths required to accommodate large vehicles, while keeping the speed of cars to around 20mph.

Chicane designs vary considerably ... two broad categories ... : (a) single lane working consisting of build-outs, staggered on alternate sides of the road, narrowing the road so that traffic from one direction has to give way to opposing traffic; (b) two-way working, using build-outs to provide deflection, but with lanes separated by road markings, or a central island. (From studies) ... the overall reduction at the chicanes for both mean and 85th percentile speed was 12 mph. The average mean speed was found to be 23 mph and the 85th percentile speed 28 mph.

Speed at chicanes: At single lane working chicanes, the average mean speed was 21 mph and the average 85th percentile speed was 26 mph. The average reduction in the 85th percentile speed was 14 mph. At one scheme which incorporated a speed cushion, the mean speed fell to 12 mph. At two-way working chicanes the average mean speed was 27 mph and the average 85th percentile speed was 31 mph. The average reduction in the 85th percentile speed was 11 mph.

Speeds between chicanes: The information available indicated a reduction in overall mean speeds to 29 mph, and 85th percentile speeds to 31 mph. There appeared to be greater reductions in speeds between chicanes where single lane working schemes were used. Reductions for both mean and 85th percentile speeds of 12 mph were obtained, giving speeds of 23 mph and 27 mph respectively. At two way working schemes the reduction was 6 mph, with mean and 85th percentile speeds of 31 mph and 34 mph.

- The information suggests that chicanes could well be the appropriate 'physical supporting measures': both for deterring through traffic and regulating speeds in village feeder roads.

The average cost of installing a single lane working chicane was £3,000, including signing and lighting. (TRL Report 313, 1999).

For the combination of a roundabout or gateway and chicane to be both safe and effective, they must be within a relative short distance of each other. Drivers have some disincentive to accelerate if they are aware of the chicane as they pass the gateway or roundabout. The chicane would need to be located about 40m to 80m from the roundabout or gateway. The more severe the chicane deflection, or the higher the approach speed, the closer the chicane would need to be to the gateway or roundabout. Illumination and signing of chicanes needs to be checked regularly, as poorly illuminated or poorly signed chicanes can become hazards during bad weather, including snow, or the hours of darkness. At single lane working chicanes, opposing drivers should have sufficient visibility to enable either of them to give way to the other without sudden braking.

Entry treatments (Department for Transport leaflet – Entry treatments) *The design of an entry treatment can incorporate a wide variety of features. These include: build-outs and pinch-points, changes in surface texture or colour, vertical deflections of the carriageway, bollards and planting, tactile paving, signing, vertical design elements (posts, pillars, walls, fences etc) A combination of these features can heighten the visual impression given to drivers, reinforcing the message that the driver is entering a different driving environment. Design of an entry treatment should ... allow for the passage of any vehicle entitled to use the road. This does not mean, however, that the scheme cannot include elements designed to discourage access. Any speed reduction resulting from the passage of a vehicle across an entry treatment is unlikely to be sustained for any distance, and may be eroded over time, unless additional traffic calming features are introduced along the remainder of the road.*

Gateways *The Traffic Calming Regulations 1993 provide for a gateway to be used "to indicate the presence in a length or lengths of highway of traffic calming works". Gateways may be constructed on the verge, footway or cycle track. One of the main features will usually be vertical elements at the sides of the road. It is also possible for a gateway to span the carriageway. In common with all traffic calming features, a gateway may include paving, grass or other cover; pillars, planters, walls, rails or fences; and trees, shrubs and other plants. Other traffic calming works may be combined with a gateway. These could include pinch points, build-outs, islands and rumble devices, together with changes of carriageway colour and/or texture and the use of appropriate signing. Where changes in the surface of the carriageway are used, it will usually be most effective if they start at the gateway, rather than in advance of it. It has been found that any speed reduction achieved by a gateway treatment can be extremely local and may be eroded over time. To achieve the most beneficial effect, other traffic calming features will have to be located close to the gateway, and extend over the length of road over which speeds need to be constrained. The TRL report indicates that gateways can effect speed reductions of up to 6mph. However, where reductions have been achieved, these have not been sustained over any distance, and speeds within the village have at most been reduced by only 1 or 2mph. In some cases increases in speed have occurred.*

- Village traffic plans prepared by other villages which have these features (entry treatments and gateways) already in place emphasise the limited distance over which single features are effective.

Road Humps (Department for Transport leaflet – Road humps: discomfort, noise, and ground-borne vibration) Acceptance of road humps schemes depends in part on whether traffic speeds are reduced. However, it is also influenced by the degree of discomfort to vehicle occupants, and the effect the road humps may have on traffic noise and ground-borne vibrations. Bus operators, for example, have considerable concerns about the effects that their passengers and drivers may experience. Residents of streets where road humps are installed will wish to be assured that any traffic noise or ground-borne vibrations generated are not going to amount to a nuisance.

- Residents have mentioned concerns about transmitted vibration and also adverse emission effects when road humps are used.

Speed Cushions (Department for Transport leaflet – Speed cushion schemes) Three main types of speed cushion were studied: (a) a series of single cushion layouts combined with carriageway narrowings allowing only single lane working, and therefore more suitable for low flow roads. (b) groups of cushions in pairs allowing two way working, suitable for higher flow roads. (c) groups of cushions three abreast also allowing two-way working – used on wider carriageways and negating the need to have build-outs. The study has confirmed that whilst speed cushions can reduce and control vehicle speeds, they do not match the effect of flat or round top road humps. The overall average mean and 85th percentile speeds at the cushions monitored were 17 mph and 22 mph respectively, which is higher than those measured at 75 mm high flat and round top humps (see TA Leaflet 2/96)

Speed in Villages (Department for Transport – Village Speed Control Work Group) As the measures were intended to reduce the speeds of the fastest drivers, a good indicator of a scheme's effectiveness was changes in the 85th percentile speed. For the 11 schemes without measures in the village, those with only minor gateway treatments achieved reductions in 85th percentile speeds which were generally below 3mph at the gateways and below 2mph in the village. With more significant treatments at gateways, speed reductions of 6 – 7mph were attained, with reductions in the village of some 2-3mph. Where major gateways relying on more physically restrictive treatments were installed, reductions in 85th percentile speeds were 10mph in some cases, though within the village these schemes did not show any greater speed reductions than the other gateway schemes. For the 4 schemes which relied purely on measures in the villages alone, 85th percentile speed reductions were less than 3mph. For the 9 schemes having both measures in the village and significant gateways, generally 85th percentile speeds at the gateways were reduced by up to 9mph, and within the village by up to 10mph. However, in one scheme having measures in the village and a major gateway, both using significant physical restrictions, 85th percentile speeds reductions of about 12mph were obtained at the gateways and within the village. It is clear that to achieve major reductions in speeds a mixture of gateways and complementary measures is required.

- Again, this is the message which stands out from the traffic plans of other villages where this mixture has not been installed.

Dragons Teeth Markings These are usually placed prior to speed limit terminal signs. They are rather unsightly and the Department (for Transport) believes their value to be limited as they can only be seen close to their location and only have a minor effect on vehicle speeds.

- These have been used as gateway features in Plough Lane and Birch Heath Lane together with speed roundel road markings. Residents report that no discernible change in speed has resulted from them.