

Pedestrian Crossing - A507 Baldock Road, Cottered.

1 EXECUTIVE SUMMARY.

This report results from a commission under the Highways Locality Budget (HLB) of County Councillor Jeff Jones (Division 20 – Buntingford) where we have been asked to look at the possible installation of pedestrian crossing facilities on the A507 Baldock Road, Cottered, in the region of the access to the village hall.

The A507 is a busy route connecting Baldock and the A1(M) to Buntingford and the A10 and is subject to a 30mph speed limit. There are footways adjacent to the carriageway, but these are not continuous throughout the village and only overlap (i.e. one either side of the road) for a short distance of approx 45m near the village hall.

There are two sets of existing dropped kerbs in the vicinity of the village hall access; one leading across directly to the access and the others at the junction with Brook End. The use of these could be improved by way of cutting back all overgrowth to improve the visibility for and of pedestrians wishing to cross the road at either point.

However, an improvement could be made by constructing one formal crossing point between the village hall access and Brook End. This crossing point would consist of two refuge islands and localised carriageway widening/overrun to accommodate the larger vehicles which use this route.

Any progression of a scheme would need further investigation as to the viability, as the existing pedestrian survey information showed only 2 pedestrian movements to cross the A507 over a six hour survey period. Also the existing footways in the area may not encourage pedestrian use due to their condition.

The speed limit through Cottered is 30mph, but there are no street lights and any new measures may require illuminating either through the use of illuminated bollards, an illuminated central beacon and the installation of street lighting. This would depend on the outcome of a full safety audit on any submitted detailed design. Therefore, should any option progress, which involves the installation of refuge islands, the possibility that illumination of the bollards and new street lighting may be requested remains a mitigating factor. Installation of street lighting would also affect the speed limit requiring a traffic regulation order (TRO) to be progressed.

As well as this, the existing bus stop would require relocating further north-west of the current location and these works will increase the cost of the scheme.

If the above happens and there is general local support, there will need to be a more detailed design and more detailed safety audits of the proposals before any design can be taken forward for

implementation. Anticipated costs at this stage are £40,000 for design and construction, which includes safety audits, a TRO and the relocation of the bus stop.

2 SITE INVESTIGATION.

Any dimensions or distances stated are approximate.

The local County Member, Jeff Jones, requested that it be determined if a pedestrian crossing point can be installed on the A507 Baldock Road, Cottered. The main aim of this is to slow traffic down and may form part of a wider ambition to have the A507 downgraded, but this will not be considered as part of this report. The actual type and location of any crossing point is to be arrived at as part of the investigation, but the obvious starting point for a location would be near the access to the village hall as there are already footways on both sides of the road at this point and, aside from The Bull pub, this is likely the main draw to the village as there is a cricket pitch adjacent too.

This report will highlight potential issues based on a review of available information and evidence gathered as part of the investigation of the site. This will include site measurements and surveys, observations and photographs. Any issues will have suggested solutions along with costs and recommendations.

The following design standards and guidelines listed below will be referenced in order to undertake this investigation:

- Local Transport Notes 1/95 and 2/95 - The Design and Assessment of Pedestrian Crossings
- Roads in Hertfordshire – Highway Design Guide (RiH)
- DfT Manual for Streets (MfS)

2.1 Physical Site Characteristics.

Cottered is a small village of approximately 220 addresses located on the A507 in north Hertfordshire between Baldock and the A1(M) and Buntingford and the A10. Whilst it may not be the preferred route, it is heavily used by traffic accessing the A1(M) from the A10 and the reverse. There is a junction with the B1037 which heads towards Cromer and Walkern and is a route to Stevenage.

From west to east the footway provision is not consistent on either side of the road with the footway being on the south side of the road until The Town House where it is then on the north side of the road until the access to the village hall. From here until the junction with Brook End, the footway is on both sides and then on the south side only from Brook End to the end of the village. Whilst the width of the footway varies, it is of bituminous construction throughout.

The village is mainly residential with a mixture of property styles, plus The Bull pub, a Girlguiding site and the village hall. There are a couple of very limited capacity (one or two room) B&Bs and there are no other obvious businesses in the village or other sites that will draw people to the area, especially on foot. There was once a small petrol station and garage but this appears to be no longer in business.

Properties are located to the rear of the carriageway at varying distances from the kerbline and there are VXOs or access roads serving these from the carriageway.

The speed limit through the village is 30mph and, as there is no street lighting, this is backed up with repeater signs and a TRO.

Carriageway width is 7.5m in the vicinity of the village hall, narrowing to 7.2m near the pub and may well be narrower further west towards the end of the village.

2.2 Public Highway.

The extent of the public highway through Cottered is limited, in the main, to the carriageway and metalled footways as shown orange in figure 1. The areas shown green cross hatched are common land in the ownership of Cottered Parish Council.

Use of common land for highway purposes is not impossible, but requires a consultation process to be followed, along with a suitable outcome, before submission of an application under Section 38 of the Commons Act 2006 is made to DEFRA who will then decide whether the works are appropriate or not and may put conditions on any works being implemented. A typical condition is that an equal area of public highway is dedicated as common land as a swap for the common land being converted to highway. Whereas this may be possible with, say, a realignment of highway, it is not that easy if the highway extents are being expanded.

Unless a crossing point can be located where footway currently exists on both sides at the same place, any other proposal will need to go through the above process to convert common land to public highway.

This may even affect the use of street lighting if it cannot be located within the public highway, should it be required as part of a scheme.

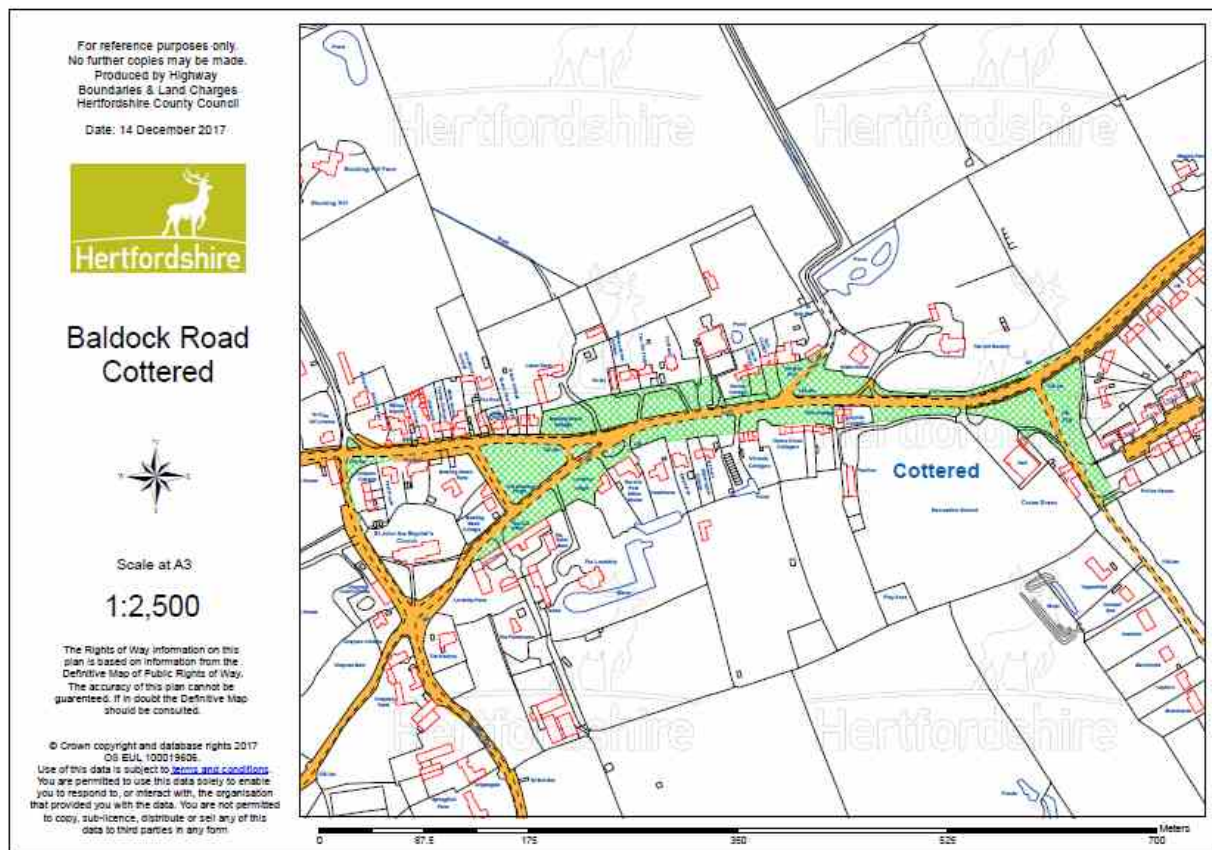


Figure 1: Public highway extents.

2.3 Environment.

The village of Cottered is a conservation area as shown by the green hatched area in Figure 2. This places constraints over what works can be undertaken in such an area and, should street lighting be a requirement of a scheme, mean that the choice of lamp columns is more expensive than the use of standard ones.



Figure 2: Conservation Area

2.4 Street Lights.

There are no street lights on the A507 within Cottered. Therefore, aside from the terminal signs at the entry points to the village, the speed limit of 30mph is indicated to drivers by the use of 30mph repeater signs.

Should this report recommend the introduction of any new physical means of crossing the road, a subsequent safety audit of any design may request that street lighting be introduced to ensure the safety of road users during the hours of darkness and that the facility is visible during these hours.

Any introduction of street lighting would require a traffic regulation order (TRO) as there is a difference between having repeater speed limit signs or lighting to make a 30mph limit enforceable. The presence of lighting at a specific spacing would bestow restricted road status under the Road Traffic Regulation Act 1984 and therefore, a 30mph speed limit. The existing TRO would need to be amended to accommodate this.

2.5 Pedestrians.

At this stage it must be pointed out that the timing of the scheme investigation was not ideal to show pedestrian numbers as the commission was not received until winter, whereas the summer months are likely to have higher numbers of pedestrians due to the lighter evenings and warmer temperatures.

Also the lack of footways and attractors may deter the number of pedestrians using the village hall and pub during the autumn and winter months when the available verges are more likely to be wet and muddy.

Despite this, pedestrian counts were taken covering peak hours of 07:00 to 10:00 and 16:00 to 19:00 hours on 14th March, 2018 to determine the numbers of pedestrians wishing to cross the

road. The survey was located near the access to the village hall as this provided a location where there are footways on both sides of the road and a nearby bus stop. The location is shown in figure 3 and numbers are counted for approximately 50m in either direction of this point as it is thought this a suitable distance that pedestrians will walk to use a nearby facility.

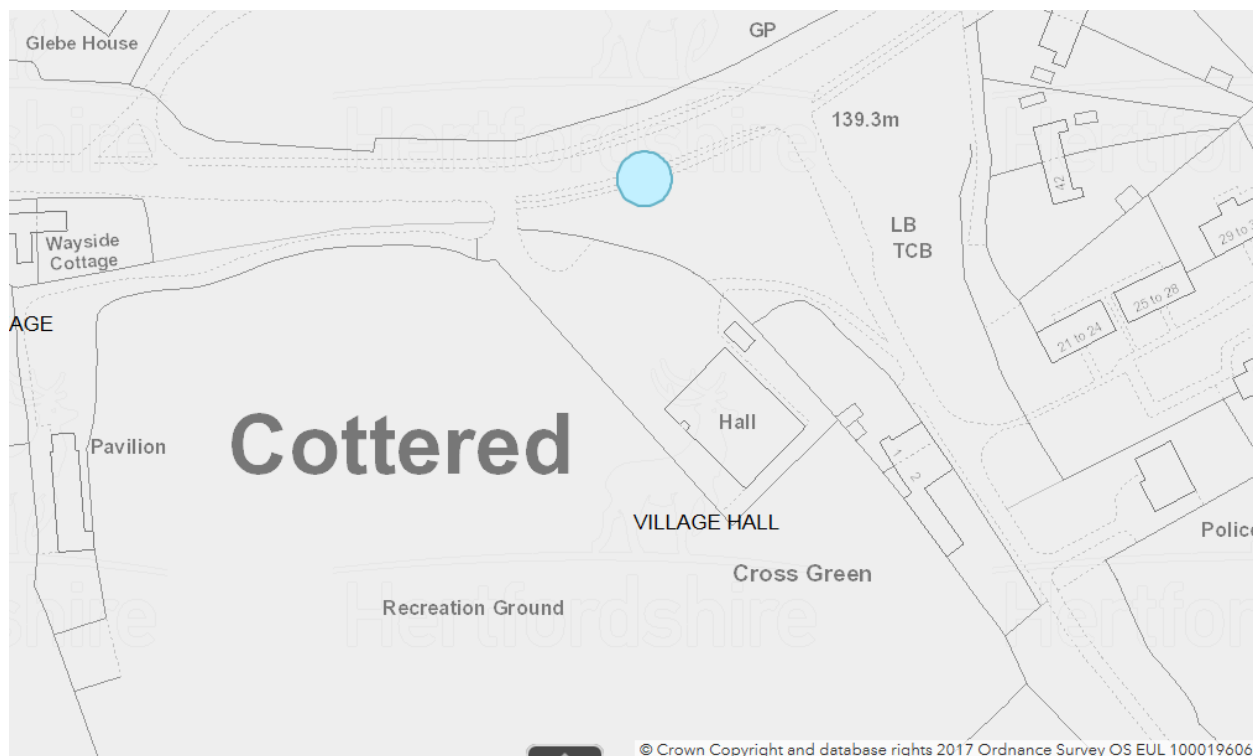


Figure 3 – Pedestrian count location.

The counts are appended to this report but they show that two pedestrian movements were observed crossing the road during the survey period. These were:

- South to north – one adult pedestrian between 08:30hrs and 08:45hrs
- South to north – one adult pedestrian between 16:00hrs and 16:15hrs

Looking at the bus timetables, these crossings do not appear to relate to any of the scheduled bus services.

The weather during the survey was stated as being fine, so there would have been little impact on the numbers recorded.

Survey records are appended to this report, though should a scheme be progressed, it is recommended that a further pedestrian survey be undertaken during the summer to see if there is an increased level of pedestrians crossing the road.

2.6 Public Transport.

There are four bus stops on the A507 in Cottered two for eastbound buses and two for west bound buses. At Warren Lane the bus stops are on opposite sides of the road to each other. The other two

stops are opposite Flint Cottage for eastbound buses and at the village hall access for westbound buses. These locations are shown as orange dots in figure 4.



Figure 4 – Bus stop locations

The route is served by the 386 Richmond's Coaches service which runs at the following times (for the bus stop opposite Flint Cottage):

- Westbound.
 - o Monday to Friday: 07:28, 10:02, 13:02 and 17:22
 - o Saturday: 07:44, 10:02, 13:02 and 17:12
- Eastbound.
 - o Monday to Friday and Saturday: 09:45, 13:45, 16:45 and 19:25

There are no services on a Sunday.

Looking at the times of the service it is likely they do not appeal to commuters, especially for the eastbound service. Therefore they are unlikely to generate much pedestrian traffic.

A brief discussion has shown that it can be possible to relocate the existing bus stop outside the village hall should any proposals affect this location. However, any works would need to upgrade the facilities at the stop to bring it in line with current HCC standards. For example this means that easy access kerbs would be used.

2.7 Vehicle Speeds.

The current speed limit through the village is 30mph and this is backed by TROs, one from 1946 and the other from 1959.

Speed and volume counts were measured at two locations in the area over the period 14th to 20th March. The locations, numbers 20171621 and 2017162, are shown in figure 5 and aim to give a representative idea of the real speeds vehicles drive through the area.

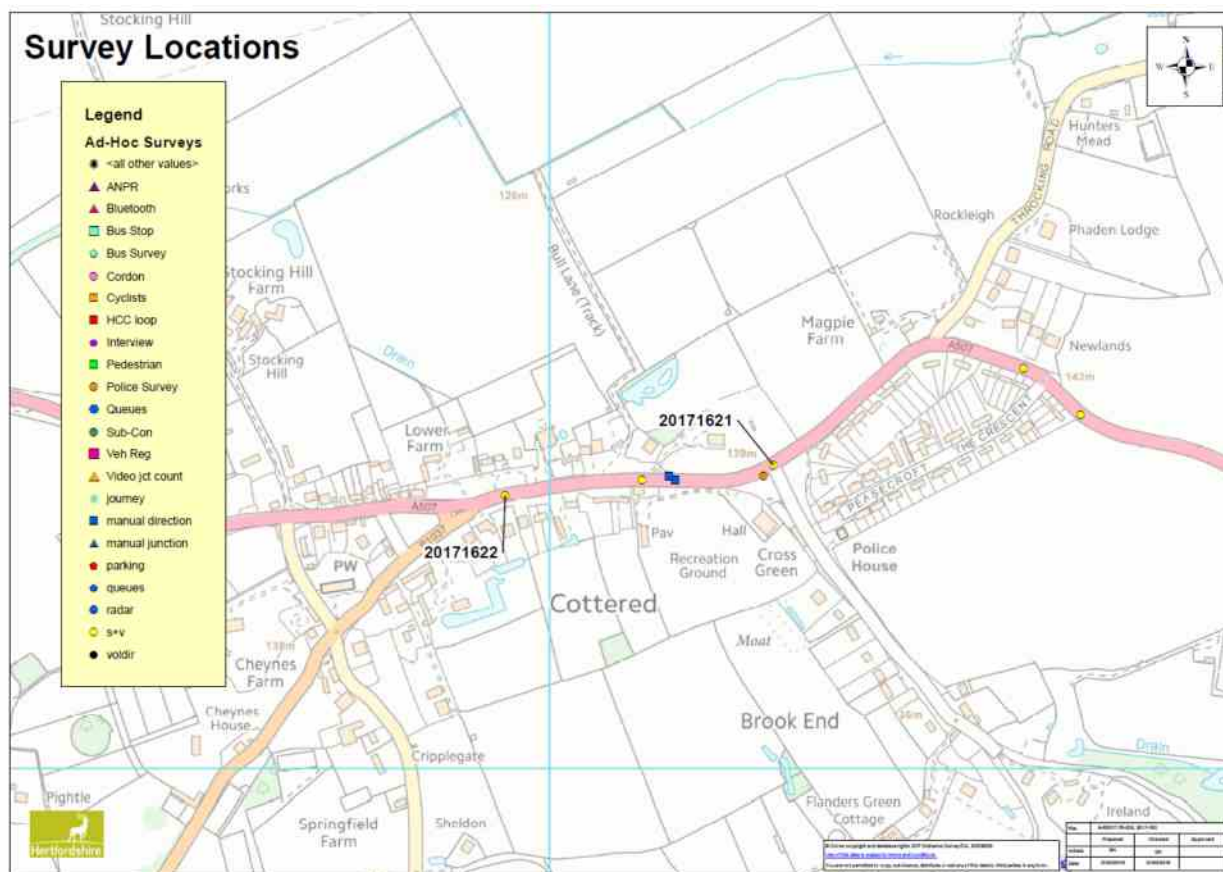


Figure 5: S&V Locations

The figures obtained from these surveys show that the two way 85 percentile speeds (85th %ile) are in excess of 35mph and are mainly exceeding 37 or 38mph on a daily basis. An example day of the S&V survey is appended to this report and the full set of results is available on request.

Mean two way average speeds are approximately 33mph at each location.

Using the HCC Speed Management Strategy (SMS), these measured speeds indicate that drivers are exceeding the posted 30mph speed limit, though not by a large margin. The SMS aims to set speed limits based on the measured mean average speeds, plus a number of other factors which includes the road classification and the environment through which the road passes.

Whilst not forming part of this report, it could be argued that the speed limit through Cottered should be reviewed to ensure that the appropriate limit and/or measures are in place. However this does not mean that it would conclude that 30mph is the correct limit. Another option is to put the

area forward for possible funding as a speed compliance site, but that is outside the scope of this report.

2.8 Vehicle Volumes.

Aside from weekends when the volume drops off significantly, the average daily two way traffic flow through the village is over 9500 vehicles over each 24hour period with peak hour two way flows approaching 1000 vehicles/hour.

This length of the A507 is classified as a main distributor road. Using TA 79/99 – ‘Traffic Capacity of Urban Roads’, this length of road could be classed as UAP3 and, taking into account the road widths, an hourly flow in each direction of 1300 vehicles would be considered an achievable maximum.

However, this location is not an urban road and the closest document for assessing rural roads is TA 46/97 “Traffic Flow Ranges for use in the Assessment of New Rural Roads”. Again, this is not an ideal document as it is only concerned with trunk roads and classifies rural roads as “all purpose roads and motorways not subject to a local speed limit”. This implies the road will have a derestricted speed limit and the lowest category listed here has an annual average daily traffic flow of up to 13000 vehicles.

Therefore, without any definitive guidance, it can only be assumed that the volume of vehicles using this road is satisfactory as congestion is not a reported issue.

2.9 Personal Injury Collisions (PICs).

PICs are an indication of any issues which may exist at a site, so here we would be looking for a concentration of collisions between vehicles and pedestrians which would indicate both where there is a desire line for pedestrians to cross and what may be causing any of the collisions to occur.

They are usually measured over a three year period, but the data for the five year period to the end of July 2017 shows two PICs within a 100m radius of the junction with the village hall. None of these involved pedestrians or excessive speed. The most recent one of these PICs occurred in April 2013, so it is arguable that there have been no PICs in the last five years at the time of writing (April 2018).

2.10 Existing Pedestrian Facilities.

An extensive overview of the road has not been undertaken, but a more detailed look at the preferred location has.

There are no formal pedestrian crossing points in Cottered which are either those with refuge islands, a zebra crossing or signal controlled crossing.

However, in the vicinity of the village hall access there are two sets of dropped kerbs, which appear to be crossing points for pedestrians and their locations are indicated on figure 6 as thick orange lines

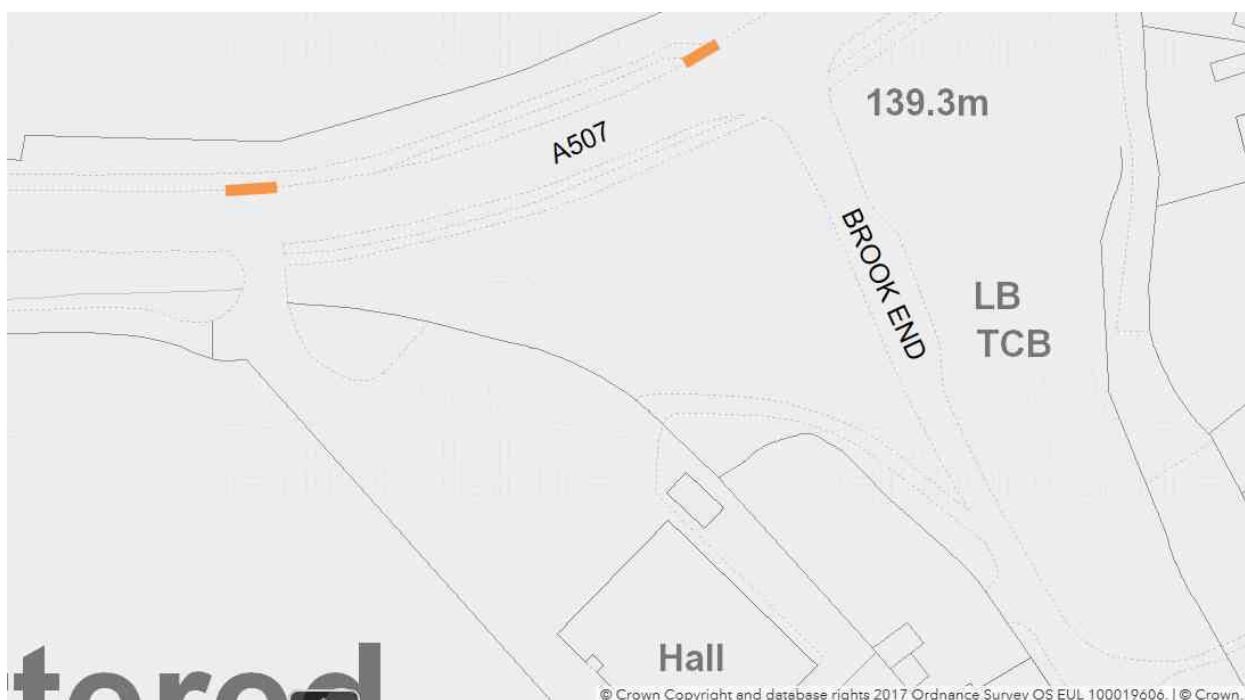


Figure 6: Existing dropped kerbs for pedestrians.

The kerbs opposite the village hall access do not lead a pedestrian to a similar facility as they would walk directly to the access of the village hall. It is a similar position at the dropped kerbs opposite Brook End where a pedestrian would need to use the dropped kerbs provided and aligned for those walking across Brook End.

Heading west through the village, those footways that exist are probably not the most attractive to pedestrians being of uneven surfaces with dirt and detritus over the surface and built up at the rear.

It has been observed that there do not appear to be any walked routes along the verges where no footways exist, so the assumption is that any pedestrians cross the road as soon as they can to use the metalled footway on the opposite side.

2.11 Drainage.

There is an existing drainage system as there are gullies at the carriageway edge with ditches at some locations to the rear of the footways. Whilst the assumption is the gullies are connected to the ditches this has not been proven.

No levels have been taken at this site, but the site visibly drains downhill from east to west at the location of the existing and possible crossing points.

The current condition of the drainage has not been investigated as part of this study.

2.12 Statutory Undertakers Plant.

Plans were requested and they show that there is statutory undertakers plant within the vicinity of works should any proposals involve excavation of the ground. Whilst this does not mean that works

cannot be undertaken, they may affect the cost of the works should either a diversion or special protection measures of the plant be required.

Should any design progress that involves excavation, then there should be trial pits to determine the exact depth and layout of the plant and if it will affect any design.

3 DESIGN CONSIDERATIONS.

This section details those aspects of highway design that a crossing point should or must comply with.

3.1 Pedestrian Visibility.

There is criteria laid out in the HCC design guide RiH, which details the requirements for new highway layouts and apparatus.

For visibility both for and of pedestrians, this is set out in Section 4, Chapter 11, 'Pedestrian Facilities and Street Furniture' and, in particular, 11.3.7 for visibility splays at pedestrian crossing points.

Figure 7 shows the layout used when measuring the required X and Y distances for pedestrian visibility. The X distance is approximately where a pedestrian would be standing back from the kerb waiting to cross the road and allows them to either be alone or with a bicycle or pushchair. The Y distance is measured along the kerb and allows a pedestrian and driver to have sight of each other so a pedestrian can judge if it safe to cross and a driver has sufficient time to brake should they encounter a pedestrian crossing. NMU refers to non-motorised users of the highway and includes pedestrians, cyclists, horse riders etc.

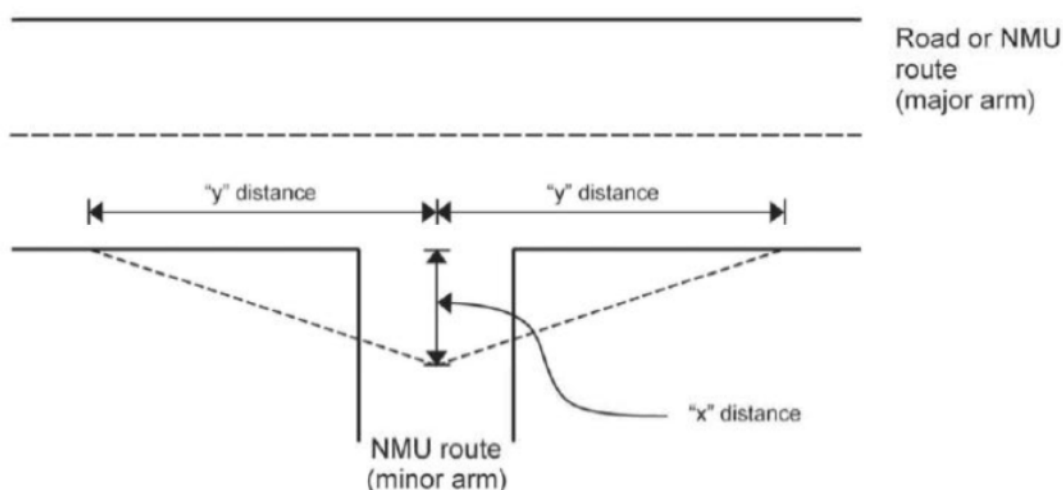


Figure 7 – Visibility X and Y measurements.

The recommended X distance is 2m with an acceptable limit of 1.5m. In practice it may be lower than this as a pedestrian may stand much closer to the carriageway to view traffic. In this case, 1.5m would be a suitable measurement.

For 30mph roads the Y distance should be 90m and 120m on a 40mph road. As the speed limit is 30mph the 90m measurement is applicable, though this should be thought of as a minimum due to the measured speeds being higher, so a longer Y distance would be preferable.

3.2 Vehicle Speeds.

The existing vehicle speeds as stated above affect the possible options that can be considered at this location.

The effect on visibility is also stated above and it is arguable that the higher values should be used for the 'Y' distance and we should be looking at achieving 120m along the kerb line. However, this is not going to be possible at the likely locations but we can comply, more or less, with the 90m distance.

A controlled crossing is a zebra crossing or signal controlled crossing. For a zebra crossing the 85%ile speeds need to be less than 35mph so, as they are higher than that here, this is not a suitable crossing type.

A signal controlled crossing could be used, but would need a power supply for the signals and the possible installation of a system of street lighting to ensure correct visibility of the crossing point. Whether the installation of street lighting would meet with the approval of the local community has not been determined, so would need discussion should a more detailed design be required.

3.3 PV².

Historically, the establishment of a crossing facility was based on a numerical score, which remains a useful guide. The current assessment under Local Transport Note 1/95 (The Assessment of Pedestrian Crossings) incorporates other factors to take account of site specific issues, time taken to cross, the location of schools and the difficulty of crossing at a site by considering the number of gaps in the traffic flow which are acceptable to pedestrians.

Nationally, the criteria was a PV² value equal to or greater than 1.0×10^8 , averaged over 4-peak hours. HCC revised the criteria requiring a PV² value of 0.7×10^8 when children and those with impediments to walking are factored in and count double in the calculation, thus providing a greater opportunity for a crossing to be provided.

However, as the number of pedestrians observed crossing at this location was a total of two over the whole survey period and the vehicles volumes are anywhere between 650 and 997 vehicles in both directions averaged over a five day period over the same hours as the pedestrian surveys, the sums here will not be anywhere near 0.7×10^8 and are more like 0.01×10^8 .

Therefore, there would be no numerical justification for the provision of a pedestrian crossing here.

3.4 Parish Council.

The comments of Cottered Parish Council (CPC) were sought for their thoughts on where any possible crossing point should be located.

Whilst the Girlguiding site was suggested as an alternative location, CPC are of the opinion that visitors here arrive by vehicle and not on foot. So, the CPC preference is for a crossing point to be

located between Brook End and the village hall access, which concurs with initial thoughts following a site overview.

3.5 Drainage.

Any new installations will need to comply with current guidance on dropped kerbs, which is to lay them flush with the carriageway so there is no upstand to negotiate for those with pushchairs/prams or in wheelchairs or mobility scooters.

This poses a problem in that water will collect at this location and pond at the pedestrian crossing point. If levels indicate this will be a problem, then an uncontrolled crossing point can have a 6mm upstand to prevent ponding.

These issues would be identified and resolved at a detail design stage, though this could include additional drainage features to prevent ponding at the crossing point.

New footway surfaces need to have a maximum gradient of 1:40 allowing water to drain to the carriageway. It is acknowledged that the gradient around dropped kerbs will be steeper than this, but this is acceptable for a distance less than 5m and a maximum gradient of 1:12.5.

4 Options.

Based on the above information, the following options are suggested. As the site has not been surveyed to gain an accurate topographical layout, OS plans have been used and any dimensions from these should be considered approximate. A topographical survey would be required for any detailed design.

1. Do nothing. In real terms there are no pedestrians wishing to cross the A507 at this location, so there is no requirement to fund works here.
2. Improve the existing layout. The existing dropped kerbs opposite the access to the village hall, whilst on a bend, are not too far from the apex of the bend. However, due to the overgrowth of existing greenery, the actual visibility at this point is reduced to approximately 26m to the north east, whereas that to the west remains uncompromised.

To cut back the existing vegetation will require the co-operation of the landowners of private properties and the common land as the majority of this is from plants within these areas, so do not form part of the public highway.

As the works would be carried out by private parties, there would be no cost involved, but the visibility to the north east would be improved by approximately 70m. The anticipated visibility should these works be carried out is shown on drawing HC/G-HLBo3.Y5/20/01 appended to this report.

3. Provision of traffic islands. The existing crossing location could be relocated approximately 20m to the north east and pedestrian refuge islands installed to break up the crossing into two stages for pedestrians. However, this would require the relocation of the bus stop and shelter approximately 50m further north east. Also, the works to realign the footways to a better line and level would be extensive as the footway on the north west side of the road is approximately 400mm lower than the carriageway. The refuge islands would be a minimum

width of 1.5m necessitating an increase in the carriageway width or an overrun area for larger vehicles to pass, especially as there are likely to be farm vehicles using this route.

As there is no street lighting present, there is no legal requirement to illuminate any new pedestrian refuge islands. However, a safety audit of a detailed design may request that any new installation have illuminated bollards, a central beacon and street lighting.

At this stage, only informal safety engineer comments have been sought on the likelihood of the use of refuge islands raising any major issues. Based on an overview, there are no major issues with this type of proposal, but a full audit of a detailed design will consider the lighting aspect.

A possible layout for this is shown on drawing HC/G-HLBo3.Y5/20/02 appended to this report.

Minimum costs of this option, without any street lighting, would be anticipated at £40,000 for design (including safety audit, S38 procedures and topographical survey) and construction costs (including moving the bus stop).

4. Provision of traffic islands at another location in the village. This has not been considered at this stage as all other locations would require the construction of a new footway on common land, which would need to go through the Section 38 process as stated above. Whilst the majority of Option 3 would be the same, the S38 aspect may be more time consuming due to the quantity of common land that may need to be converted.
5. Provision of controlled crossings. Due to the low PV² calculation, the provision of a zebra or signal controlled crossing has not been considered at this stage. This is partially due to the cost of installing such a feature, which would require street lighting to be part of the design and the fact that it is likely to have low usage. This leads to drivers becoming complacent and not expecting to find the facility in use. It is possible that a controlled crossing may require carriageway resurfacing to provide adequate skid resistance for braking vehicles, further increasing the cost. If located in the vicinity as the islands in Option 3, the bus stop would need to be relocated.

Minimum costs of a zebra crossing, without any street lighting, would be anticipated at £50,000 for design (including safety audit and topographical survey) and construction costs.

Outline drawings of the existing visibility and Option 3 can be found in Appendix B.

5 Summary.

Based on this initial investigation, the majority of the pros and cons of each option has been included in the option descriptions above.

Option 1 will not resolve the problem so should not be considered.

Option 2 will improve the existing facility by increasing visibility of approaching vehicles for pedestrians and making it easier to judge when to cross the road. This option also has the benefit of zero costs if the works are carried out by the landowners.

Option 3 would provide an improved crossing point for pedestrians and allow them to cross from one footway to another rather than to a vehicle access point as is the case with the current layout. It may also provide a reduction in vehicle speeds, especially if constructed with an overrun rather than a carriageway widening. However, this option will require the Section 38 process to be used to enable the use of common land for the footway realignment and this can draw objections which could mean the scheme could not progress.

6 Recommendation.

From the above, the obvious recommendation is Option 2 as it will result in improved visibility for pedestrians at a minimum cost and would require no further physical works aside from ensuring the visibility splays are kept clear.

However, this may not draw more pedestrians to the crossing point, so Option 3 should be considered further by there being a consultation throughout the village as to whether street lighting would be an acceptable compromise for such a feature to be installed.

At the same time, there could also be a consultation across the village as to alternative locations and would there be any objections to the use of common land for either the recommended option or alternative locations, though how extensive the use of common land would be depends on any suggested alternative locations.

Aside from Option 2, any other scheme would need to be progressed through detailed design which may throw up issues, not noted here and have a subsequent effect on scheme costs.

Report prepared by: **Date:**

Lance Holman (Project Engineer)

Report checked by: **Date:**

Martin Nevill (Project Engineer)

Report approved by: **Date:**

Rosemary Chatindo (AHM)

7 Appendix A – Site Photographs.



Pic 1 – View from village hall access to existing dropped kerbs.



Pic 2 – Pedestrian visibility to the north east approx 1.5m from kerb at existing location.



Pic 3 – Pedestrian visibility to the west approx 1.5m from kerb at existing location.



Pic 4 – View across to existing bus stop at alternative crossing location.



Pic 5 – Pedestrian visibility to the north east approx 1.5m from kerb at alternative location.



Pic 6 – Pedestrian visibility to the west approx 1.5m from kerb at alternative location.



Pic 7 – View to show level differences between footway and carriageway at alternative crossing location



Pic 8 – View looking south west towards alternative location at drivers eye level approx 60m away. Shows change in road level.



Pic 9 – View looking east towards both existing and alternative locations from approx 50m away on drivers approach.



Pic 10 – Looking across to Brook End at other existing crossing point.



Pic 11 – Looking across from Brook End at other existing crossing point.



Pic 11 – Example of north side footway condition in the west of the village.



Pic 12 – Example of north side footway condition in the west of the village. Near Coopers Coppices.

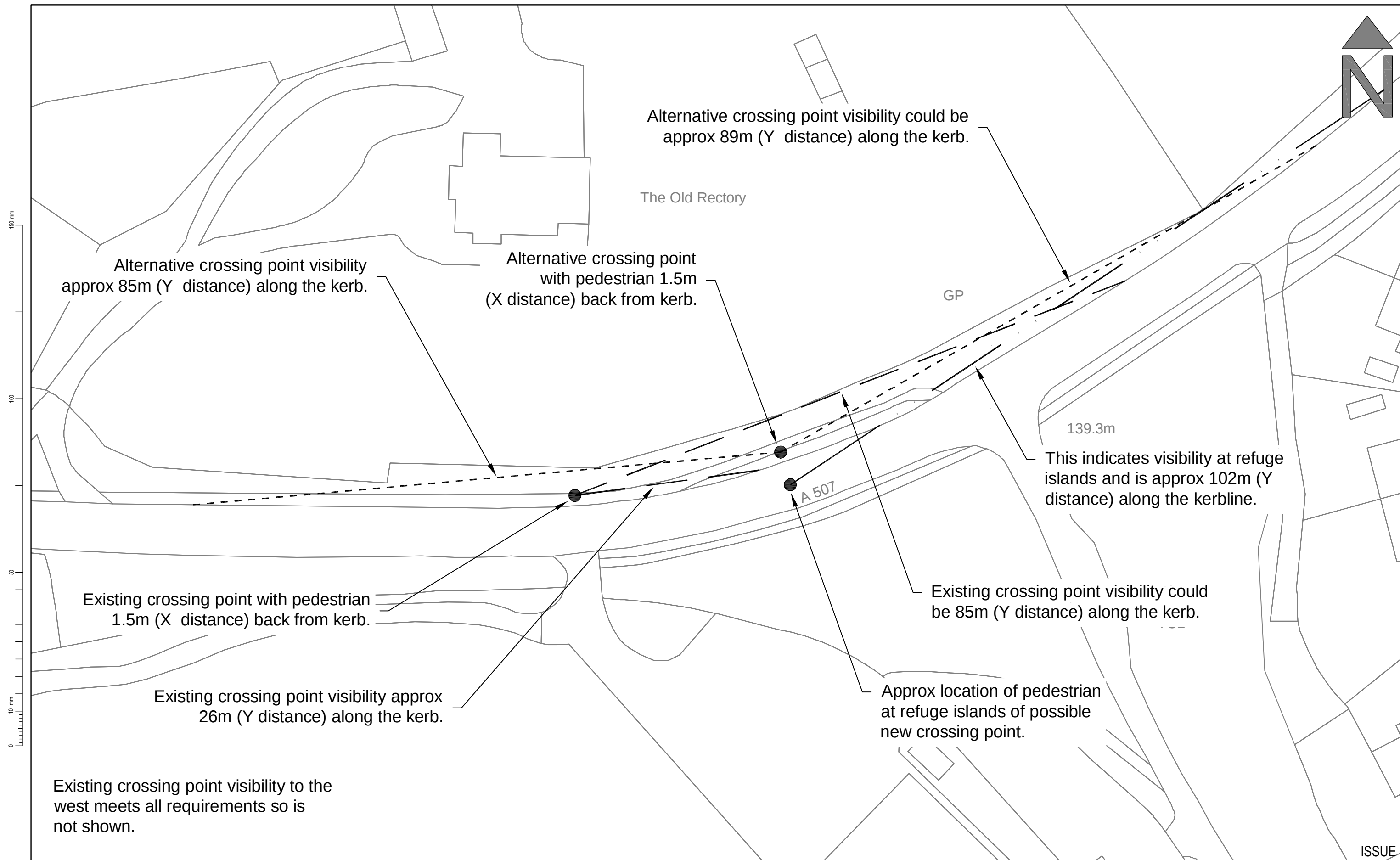
8 Appendix B – Scheme Proposal Drawings.

Drawings included here are:

HC/G-HLBo3.Y5/20/01/01 – Existing & Possible Visibility Splays

HC/G-HLBo3.Y5/20/01/02 – Traffic Islands Possible Layout

The brief did not include for a topographical survey, so these drawings should be considered as outline only.



ISSUE

Revision	Amendment	Approved	Revision Date



COUNTY HALL
Pegs Lane
Hertford, Herts
SG13 8DN
Phone: 01992 555555

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Designed	Approved	Approved Date
LHolman	MNevill	Apr '18
Drawn	Scale	
LHolman	NIS	

Project		
Cottered Pedestrian Crossing		
Sheet		
Options 1 - 3 Visibility Splays Existing and Possible		
Project No.	Sheet No.	Revision
HC/G-HLB03.Y5/20/01	01	R0

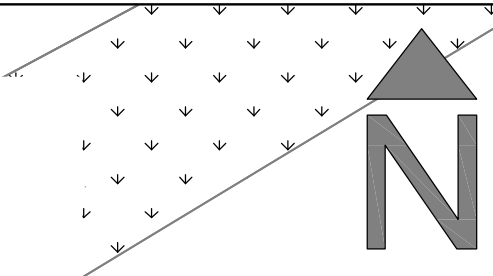
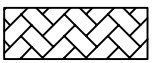
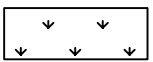
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Key:

Denotes new footway.

Denotes grass verge.

Denotes carriageway widening or overrun area.



Existing footway to be converted to grass verge. New 2.0m wide footway to be constructed and realigned to accommodate carriageway widening or overrun area. Will encroach on to common land.

New 1.5m wide refuge islands. May need central beacon and illuminated bollards.

Carriageway lanes to be 3.0m at islands. Local carriageway widening to be undertaken to provide additional width or an overrun area for larger vehicles to safely pass the islands.

A 507

Existing bus stop and shelter to be relocated north east of the Brook End junction

Village hall access

Footway to be constructed 2.0m width and realigned to accommodate carriageway widening or overrun area. Will encroach on to common land.

BROOK END

ISSUE

Revision	Amendment	Approved	Revision Date

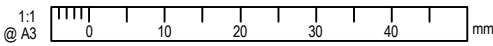


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Designed	Approved	Approved Date
LHolman	MNevill	Apr '18
Drawn	Scale	
LHolman	NTS	

Project	
Cottered Pedestrian Crossing	
Sheet	
Option 3 - Traffic Islands Possible Layout	
Project No	Sheet No
HC/G-HLB03.Y5/20/01	02
Revision	
R0	

150 mm
100
50
10 mm
0



9 Appendix C – Pedestrian Counts.

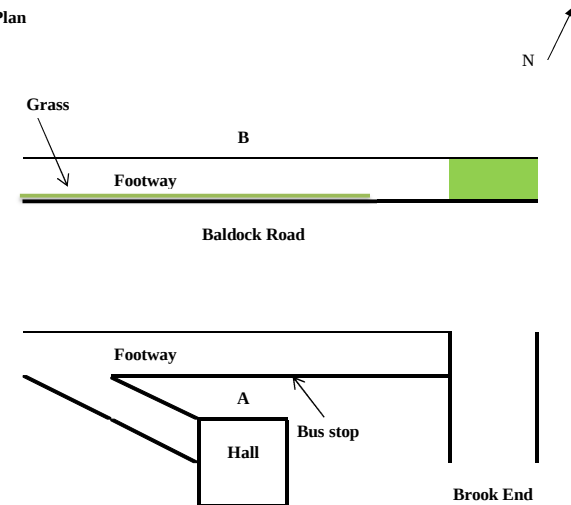
PEDESTRIANS CROSSING ROAD

Road No A507 Location Baldock Road, Cottered
 Day & Date Wednesday 14th March 2018 Weather Fine
 Crossing Pedestrians crossing A to B and B to A Job No. 17-162
 Recorded by Enumerators Grid Ref. 23



A to B				B to A			
Adult	Aged/ Dis.	Child	Hour Comm.	Adult	Aged/ Dis.	Child	TOTAL
0	0	0	07:00	0	0	0	0
0	0	0	07:15	0	0	0	0
0	0	0	07:30	0	0	0	0
0	0	0	07:45	0	0	0	0
0	0	0	08:00	0	0	0	0
0	0	0	08:15	0	0	0	0
1	0	0	08:30	0	0	0	1
0	0	0	08:45	0	0	0	0
0	0	0	09:00	0	0	0	0
0	0	0	09:15	0	0	0	0
0	0	0	09:30	0	0	0	0
0	0	0	09:45	0	0	0	0
1	0	0	TOTAL	0	0	0	1

Sketch Plan



Count of pedestrians that have had to cross the grass, next to the road, on side B

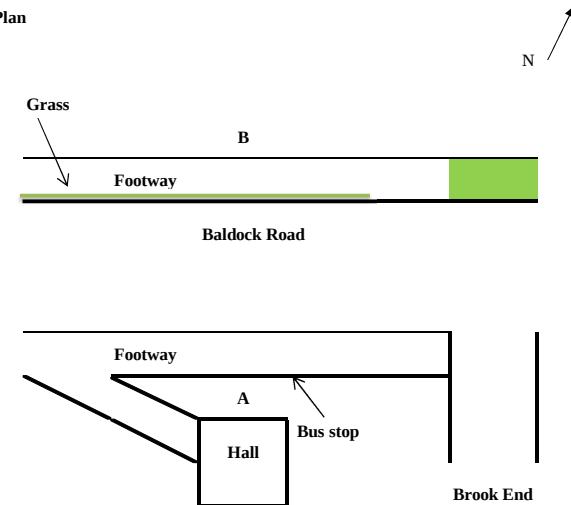
PEDESTRIANS CROSSING ROAD

Road No A507 Location Baldock Road, Cottered
 Day & Date Wednesday 14th March 2018 Weather Fine
 Crossing Pedestrians crossing A to B and B to A Job No. 17-162
 Recorded by Enumerators Grid Ref. 23



A to B				B to A			
Adult	Aged/ Dis.	Child	Hour Comm.	Adult	Aged/ Dis.	Child	TOTAL
1	0	0	16:00	0	0	0	1
0	0	0	16:15	0	0	0	0
0	0	0	16:30	0	0	0	0
0	0	0	16:45	0	0	0	0
0	0	0	17:00	0	0	0	0
0	0	0	17:15	0	0	0	0
0	0	0	17:30	0	0	0	0
0	0	0	17:45	0	0	0	0
0	0	0	18:00	0	0	0	0
0	0	0	18:15	0	0	0	0
0	0	0	18:30	0	0	0	0
0	0	0	18:45	0	0	0	0
1	0	0	TOTAL	0	0	0	1

Sketch Plan



Count of pedestrians that have had to cross the grass, next to the road, on side B

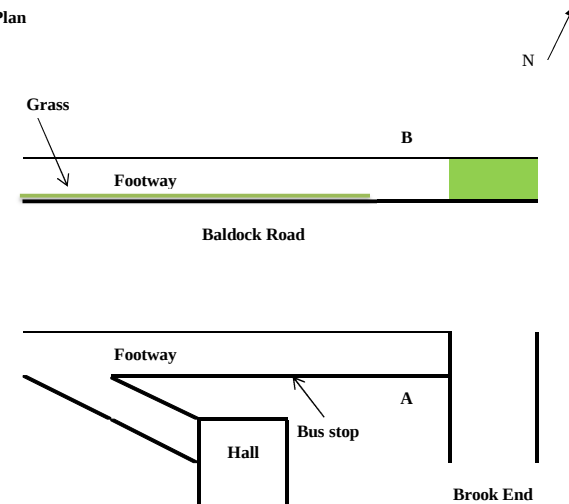
PEDESTRIANS CROSSING ROAD



Road No A507 Location Baldock Road, Cottered
 Day & Date Wednesday 14th March 2018 Weather Fine
 Crossing Pedestrians crossing A to B and B to A Job No. 17-162
 Recorded by Enumerators Grid Ref. 23

A to B				B to A			
Adult	Aged/ Dis.	Child	Hour Comm.	Adult	Aged/ Dis.	Child	TOTAL
0	0	0	07:00	0	0	0	0
0	0	0	07:15	0	0	0	0
0	0	0	07:30	0	0	0	0
0	0	0	07:45	0	0	0	0
0	0	0	08:00	0	0	0	0
0	0	0	08:15	0	0	0	0
0	0	0	08:30	0	0	0	0
0	0	0	08:45	0	0	0	0
0	0	0	09:00	0	0	0	0
0	0	0	09:15	0	0	0	0
0	0	0	09:30	0	0	0	0
0	0	0	09:45	0	0	0	0
0	0	0	TOTAL	0	0	0	0

Sketch Plan



Count of pedestrians that have crossed where the footpath meets the road on side B, and have therefore not had to cross the grass.

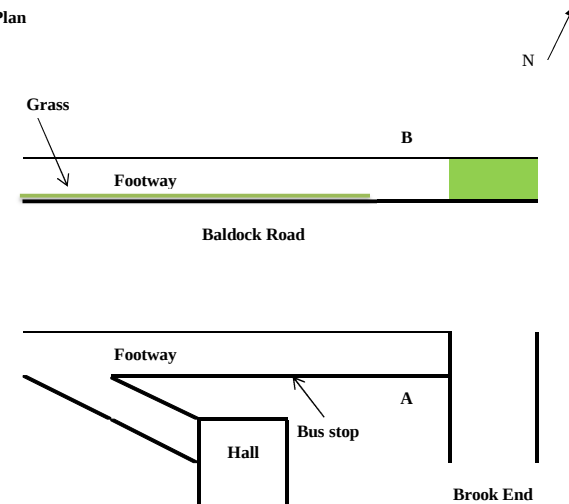
PEDESTRIANS CROSSING ROAD



Road No A507 Location Baldock Road, Cottered
 Day & Date Wednesday 14th March 2018 Weather Fine
 Crossing Pedestrians crossing A to B and B to A Job No. 17-162
 Recorded by Enumerators Grid Ref. 23

A to B				B to A			
Adult	Aged/ Dis.	Child	Hour Comm.	Adult	Aged/ Dis.	Child	TOTAL
0	0	0	16:00	0	0	0	0
0	0	0	16:15	0	0	0	0
0	0	0	16:30	0	0	0	0
0	0	0	16:45	0	0	0	0
0	0	0	17:00	0	0	0	0
0	0	0	17:15	0	0	0	0
0	0	0	17:30	0	0	0	0
0	0	0	17:45	0	0	0	0
0	0	0	18:00	0	0	0	0
0	0	0	18:15	0	0	0	0
0	0	0	18:30	0	0	0	0
0	0	0	18:45	0	0	0	0
0	0	0	TOTAL	0	0	0	0

Sketch Plan



Count of pedestrians that have crossed where the footpath meets the road on side B, and have therefore not had to cross the grass.

Appendix D – S&V Counts.

The attached S&V results are from an example day taken during the survey period and show that for 14th March 2018 with both directional and total flow summary sheets from the survey location 20171621.

The full set of S&V results are available on request.

Site No: 20171621

Site Reference: 20171621

A507, Baldock Road, Cottred, off 'Filtered by: No Filter

Speed Report (Speed Limit 30 Mp 14-Mar-18

Channel: Eastbound

Time Begin	Total Volume	85th %ile	Mean Ave.	Std. Dev.	Bin 1 <5MPH	Bin 2 5-<10	Bin 3 10-<15	Bin 4 15-<20	Bin 5 20-<25	Bin 6 25-<30	Bin 7 30-<35	Bin 8 35-<40	Bin 9 40-<45	Bin 10 45-<50	Bin 11 50-<55	Bin 12 55-<60	Bin 13 =>60
00:00	14	39.6	35.7	4.5	0	0	0	0	0	0	2	3	7	2	0	0	0
01:00	7		36.1	8.3	0	0	0	0	0	0	2	2	1	1	0	1	0
02:00	7		38.9	4.4	0	0	0	0	0	0	0	2	1	4	0	0	0
03:00	9		39.2	4.7	0	0	0	0	0	0	0	3	0	6	0	0	0
04:00	23	45.1	38.6	7.2	0	0	0	1	0	0	1	3	9	5	3	1	0
05:00	63	39	34.2	4.2	0	0	0	0	0	0	9	29	19	6	0	0	0
06:00	235	39.3	34.8	4.8	0	0	1	2	0	22	98	89	18	5	0	0	0
07:00	498	37	32.8	3.6	0	0	0	1	3	91	284	111	7	1	0	0	0
08:00	406	36.2	32	4.6	0	1	2	4	7	92	223	64	12	0	1	0	0
09:00	273	36.7	32.1	4.9	0	3	0	3	4	55	150	50	7	1	0	0	0
10:00	202	37.6	32.6	5	0	0	1	1	3	51	94	41	7	3	1	0	0
11:00	164	36.6	31.8	4.8	0	0	0	4	7	38	81	28	6	0	0	0	0
12:00	186	37.3	32.8	4.5	0	0	2	1	3	28	105	40	6	1	0	0	0
13:00	192	37.5	32.9	4.3	0	0	1	1	5	26	108	44	7	0	0	0	0
14:00	193	37.6	32.4	4.9	0	0	1	2	6	45	84	49	4	2	0	0	0
15:00	251	37.2	32.2	5	0	1	1	3	3	62	119	54	7	0	0	1	0
16:00	276	37	32.6	4.5	0	0	3	3	5	38	162	58	7	0	0	0	0
17:00	272	37.5	32.8	4.4	0	0	0	2	4	56	140	57	11	2	0	0	0
18:00	243	38.2	33.3	4.6	0	0	0	4	3	37	121	65	12	1	0	0	0
19:00	140	39.1	33.8	5.7	0	0	1	0	2	31	52	40	10	3	0	0	1
20:00	114	39	33.9	4.9	0	0	0	0	3	18	52	29	10	2	0	0	0
21:00	86	39.7	34.8	5	0	0	0	0	0	11	41	22	9	2	1	0	0
22:00	62	38.6	33.9	5	0	0	0	0	0	14	24	20	2	1	1	0	0
23:00	36	39.4	33.6	5.4	0	0	0	0	1	8	15	7	4	1	0	0	0
Total																	
12H(7-19)	3156	37.2	32.5	4.5	0	5	11	29	53	619	1671	661	93	11	2	1	0
16H(6-22)	3731	37.7	32.8	4.7	0	5	13	31	58	701	1914	841	140	23	3	1	1
18H(6-24)	3829	37.7	32.8	4.7	0	5	13	31	59	723	1953	868	146	25	4	1	1
24H(0-24)	3952	37.9	32.9	4.7	0	5	13	32	59	737	1995	905	170	28	6	1	1
AM																	
Peak	07:00	04:00	03:00	01:00	11:00	09:00	08:00	11:00	11:00	08:00	07:00	07:00	06:00	06:00	10:00	11:00	11:00
	498	45.1	39.2	8.3	0	3	2	4	7	92	284	111	18	5	1	0	0
PM																	
Peak	16:00	21:00	21:00	19:00	23:00	15:00	16:00	18:00	14:00	15:00	16:00	18:00	18:00	19:00	22:00	15:00	19:00
	276	39.7	34.8	5.7	0	1	3	4	6	62	162	65	12	3	1	1	1

Created at 10:57:28 on 22 March 2018

Site No: 20171621

Site Reference: 20171621

A507, Baldock Road, Cottred, off 'Filtered by: No Filter

Speed Report (Speed Limit 30 Mp 14-Mar-18

Channel: Westbound

Time Begin	Total Volume	85th %ile	Mean Ave.	Std. Dev.	Bin 1 <5MPH	Bin 2 5-<10	Bin 3 10-<15	Bin 4 15-<20	Bin 5 20-<25	Bin 6 25-<30	Bin 7 30-<35	Bin 8 35-<40	Bin 9 40-<45	Bin 10 45-<50	Bin 11 50-<55	Bin 12 55-<60	Bin 13 =>60
00:00	41	40.3	34.7	5.6	0	0	0	0	0	1	11	5	17	7	0	0	0
01:00	10	41.7	37	4.7	0	0	0	0	0	0	1	2	4	3	0	0	0
02:00	14	38	32.5	6.3	0	0	0	0	0	1	5	3	4	0	1	0	0
03:00	9		36.4	9.1	0	0	0	0	0	0	2	4	0	2	0	0	1
04:00	24	45.9	36	7.4	0	0	0	0	0	1	4	8	4	2	5	0	0
05:00	47	43.4	36.6	6.9	0	0	0	2	0	3	14	13	11	3	1	0	0
06:00	192	39.6	34.6	4.5	0	0	0	0	1	23	87	56	24	1	0	0	0
07:00	536	37.8	33.3	4.3	0	0	4	4	5	59	313	125	25	1	0	0	0
08:00	602	35.7	32	3.9	0	0	0	0	9	164	325	94	8	0	1	1	0
09:00	356	34.8	31.3	4.2	0	0	3	3	8	97	199	41	5	0	0	0	0
10:00	283	35.4	31.6	3.9	0	0	1	0	5	87	144	43	3	0	0	0	0
11:00	264	35	31.7	4.2	0	0	2	2	8	56	156	37	1	2	0	0	0
12:00	253	36.3	32	4.5	0	0	2	4	4	52	141	43	7	0	0	0	0
13:00	309	36.4	32.1	4.6	0	0	1	8	7	56	177	48	12	0	0	0	0
14:00	311	36.2	32.5	4.1	0	0	1	2	5	54	191	46	11	1	0	0	0
15:00	379	36.8	31.7	5.3	0	0	6	7	12	89	183	68	12	2	0	0	0
16:00	544	37.4	32.8	4	0	0	3	1	2	100	292	135	11	0	0	0	0
17:00	649	36.3	32.3	4	0	0	4	6	4	125	380	120	9	1	0	0	0
18:00	383	36	32.3	3.7	0	0	1	0	3	87	222	62	8	0	0	0	0
19:00	165	37.2	32.7	4.3	0	0	0	0	2	37	89	27	9	0	1	0	0
20:00	123	38.9	34.2	4.6	0	0	0	1	2	10	64	35	8	3	0	0	0
21:00	106	39.4	34.2	5.3	0	0	0	0	1	22	41	29	10	2	1	0	0
22:00	75	40.1	35	5.1	0	0	0	0	0	13	26	24	10	2	0	0	0
23:00	47	41.2	36	5.6	0	0	0	0	1	4	16	17	6	2	1	0	0
Total																	
12H(7-19)	4869	36.5	32.2	4.2	0	0	28	37	72	1026	2723	862	112	7	1	1	0
16H(6-22)	5455	36.8	32.4	4.3	0	0	28	38	78	1118	3004	1009	163	13	3	1	0
18H(6-24)	5577	37	32.5	4.4	0	0	28	38	79	1135	3046	1050	179	17	4	1	0
24H(0-24)	5722	37.2	32.5	4.5	0	0	28	40	82	1161	3082	1092	204	26	5	2	0
AM																	
08:00	04:00	01:00	03:00	11:00	11:00	07:00	07:00	08:00	08:00	08:00	07:00	07:00	04:00	08:00	08:00	11:00	
Peak	602	45.9	37	9.1	0	0	4	4	9	164	325	125	25	5	1	1	0
PM																	
17:00	23:00	23:00	23:00	23:00	23:00	15:00	13:00	15:00	17:00	17:00	16:00	15:00	20:00	23:00	23:00	23:00	
Peak	649	41.2	36	5.6	0	0	6	8	12	125	380	135	12	3	1	0	0

Created at 10:57:28 on 22 March 2018

Site No: 20171621

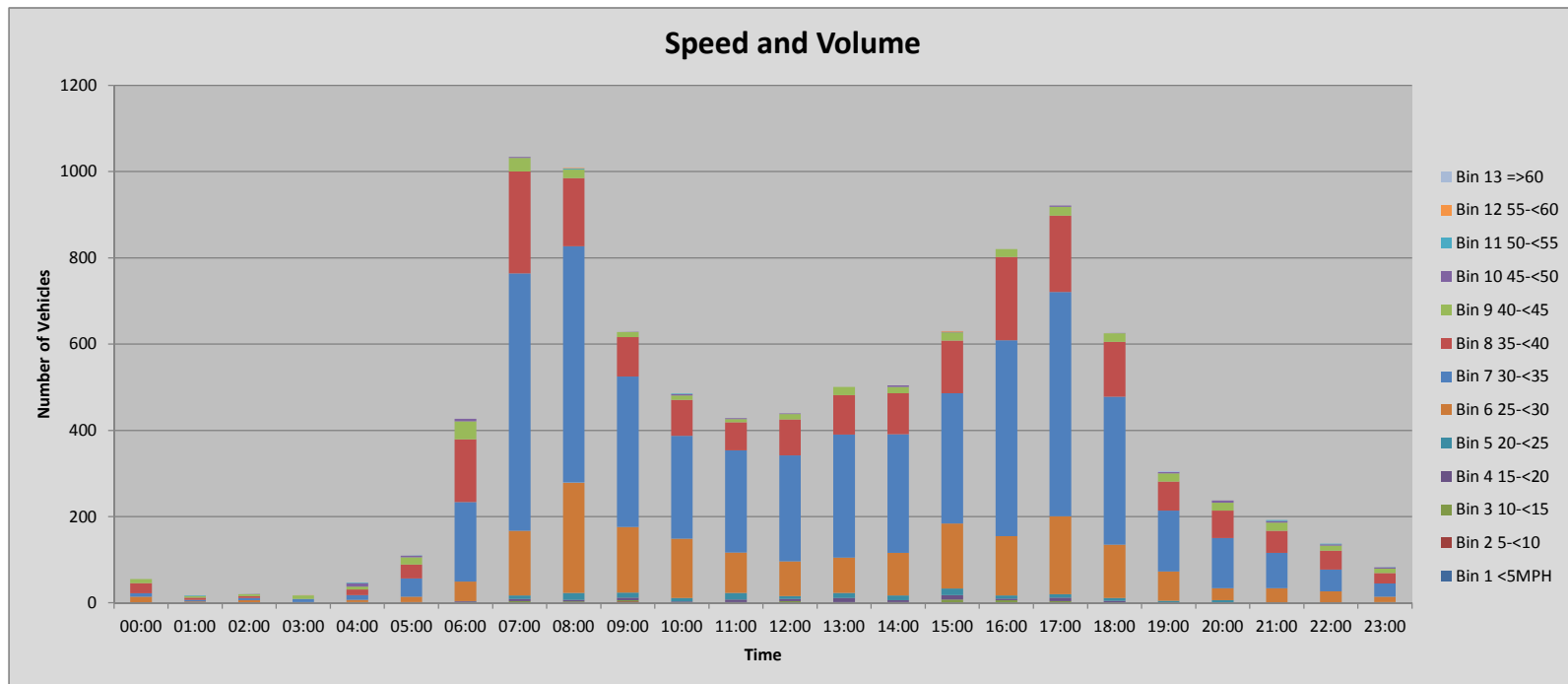
Site Reference: 20171621

A507, Baldock Road, Cottred, off 'Filtered by: No Filter

Speed Report (Speed Limit 30 Mp 14-Mar-18

Speed Report (Speed Limit 30 Mp					Channel: Total Flow													
14-Mar-18					2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	
Time	Total	85th	Mean	Std.	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12	Bin 13	
Begin	Volume	%ile	Ave.	Dev.	<5MPH	5-<10	10-<15	15-<20	20-<25	25-<30	30-<35	35-<40	40-<45	45-<50	50-<55	55-<60	=>60	
00:00	55	40.1	35	5.4	0	0	0	0	1	13	8	24	9	0	0	0	0	
01:00	17	42.4	36.6	6.5	0	0	0	0	0	3	4	5	4	0	1	0	0	
02:00	21	41.7	34.6	6.5	0	0	0	0	1	5	5	5	4	1	0	0	0	
03:00	18	43.6	37.8	7.4	0	0	0	0	0	2	7	0	8	0	0	1	0	
04:00	47	45.9	37.3	7.4	0	0	0	1	1	5	11	13	7	8	1	0	0	
05:00	110	41.2	35.3	5.6	0	0	0	2	0	12	43	32	17	3	1	0	0	
06:00	427	39.4	34.7	4.6	0	0	1	2	1	45	185	145	42	6	0	0	0	
07:00	1034	37.4	33	4	0	0	4	5	8	150	597	236	32	2	0	0	0	
08:00	1008	35.9	32	4.2	0	1	2	4	16	256	548	158	20	0	2	1	0	
09:00	629	35.5	31.7	4.5	0	3	3	6	12	152	349	91	12	1	0	0	0	
10:00	485	36.5	32	4.4	0	0	2	1	8	138	238	84	10	3	1	0	0	
11:00	428	35.7	31.7	4.5	0	0	2	6	15	94	237	65	7	2	0	0	0	
12:00	439	36.8	32.4	4.5	0	0	4	5	7	80	246	83	13	1	0	0	0	
13:00	501	36.9	32.4	4.5	0	0	2	9	12	82	285	92	19	0	0	0	0	
14:00	504	36.9	32.4	4.4	0	0	2	4	11	99	275	95	15	3	0	0	0	
15:00	630	37	31.9	5.2	0	1	7	10	15	151	302	122	19	2	0	1	0	
16:00	820	37.3	32.8	4.1	0	0	6	4	7	138	454	193	18	0	0	0	0	
17:00	921	36.7	32.4	4.1	0	0	4	8	8	181	520	177	20	3	0	0	0	
18:00	626	37.1	32.6	4.1	0	0	1	4	6	124	343	127	20	1	0	0	0	
19:00	305	38.3	33.2	5	0	0	1	0	4	68	141	67	19	3	1	0	1	
20:00	237	39	34.1	4.8	0	0	0	1	5	28	116	64	18	5	0	0	0	
21:00	192	39.6	34.4	5.1	0	0	0	0	1	33	82	51	19	4	2	0	0	
22:00	137	39.4	34.5	5.1	0	0	0	0	0	27	50	44	12	3	1	0	0	
23:00	83	40.5	35	5.7	0	0	0	0	2	12	31	24	10	3	1	0	0	
Total																		
12H(7-19)	8025	36.8	32.3	4.4	0	5	39	66	125	1645	4394	1523	205	18	3	2	0	
16H(6-22)	9186	37.2	32.6	4.5	0	5	41	69	136	1819	4918	1850	303	36	6	2	1	
18H(6-24)	9406	37.3	32.6	4.5	0	5	41	69	138	1858	4999	1918	325	42	8	2	1	
24H(0-24)	9674	37.5	32.7	4.6	0	5	41	72	141	1898	5077	1997	374	54	11	3	1	
1900 - 0800	2683		35.0		0.0	0.0	75.0	192.5	540.0	11082.5	41600.0	26625.0	8542.5	1805.0	420.0	57.5	62.5	
Exc 08 - 10	6490		34.1		0.0	7.5	387.5	875.0	2227.5	32587.5	107802.5	54150.0	12835.0	2327.5	472.5	115.0	62.5	
AM	07:00	04:00	03:00	04:00	11:00	09:00	07:00	11:00	08:00	08:00	07:00	07:00	06:00	04:00	08:00	08:00	11:00	
Peak	1034	45.9	37.8	7.4	0	3	4	6	16	256	597	236	42	8	2	1	0	
PM	17:00	23:00	23:00	23:00	23:00	15:00	15:00	15:00	15:00	17:00	17:00	16:00	18:00	20:00	21:00	15:00	19:00	
Peak	921	40.5	35	5.7	0	1	7	10	15	181	520	193	20	5	2	1	1	

Created at 10:57:28 on 22 March 2018



33.9
33.0