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CIVIL ENGINEERING CONSULTANTS

Construction Traffic Access Appraisal

for

Land at Holwell Road, Pirton

Grid Reference: 515159E, 232080N

Prepared for

Pirton Parish Council

May 2017

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APPENDICES

1 Executive Summary

1.1 The Cala Homes proposed Construction Traffic Management Plan suggests, that, up to 30 construction vehicles per day of various sizes will access the site. However, this will *not* occur throughout the whole construction period.

1.2 Construction traffic should be restricted to weekday off-peak hours 09.30 to 15.00 resulting in, on average, 5 two-way construction vehicles an hour, or 1 vehicle every 12 minutes spread across the off-peak period.

1.3 Baseline traffic flows on Holwell Road indicate less than 1 vehicle per minute in each direction in 2020 in the peak periods.

1.4 The shortest route from the site to the 'A' road network is via Holwell, being approximately 2 miles or 5 minutes by motor vehicle.

1.5 Routes via Pirton to the nearest 'A' road would be 3.5 miles/7 minutes to the A505, Hitchin, 5.5 miles/13 minutes via Shillington to the A600 or 5.2 miles/10 minutes to the A6 at Barton-le-Clay.

1.6 Traffic calming in Holwell village appears to already manage traffic effectively and only 1 slight personal injury accident (PIA) has been recorded in 18 years (1999-2016).

1.7 During the same period, the route via Pirton to the A505 has experienced over 50 PIAs including 7 in Pirton, the route via Shillington has experienced over 40 PIAs including 4 in Pirton and the route to the A6 has experienced just under 40 PIAs.

1.8 All routes to the site are constrained in some form. The route via Holwell is traffic calmed in the village. There is no traffic calming on any of the Pirton routes.

1.9 The route via Holwell has narrow sections, especially at Waterloo Lane. Localised widening could be provided to improve passing space, temporary warning signs could be installed and vegetation management would improve visibility.

1.10 There is sufficient space for construction vehicles to wait at the eastern end of Holwell Road (outside Holwell village) and be in contact with the site manager to ensure construction traffic vehicles do not need to pass others travelling to/from the site.

1.11 In total, 13 properties in Holwell on the route have no off-street parking, and 3 have no access to a footway (in Waterloo Lane).

1.12 Any construction traffic route via Pirton would need to pass a row of 10 properties that have no footway and front doors that open onto the carriageway. These properties also rely on using the carriageway for parking and waste bin collection.

1.13 Routing through Pirton to the A505 via Royal Oak Lane and Walnut Tree Road will pass over 50 properties that have no access to any footway.

1.14 Routing in Pirton to either A600 or A6 via West Lane will pass 15 properties with no off-street parking and forward visibility on approach to the junction with Shillington Road restricted by parked cars.

1.15 In conclusion, no route to the site is ideal but with careful management of construction traffic and some minor improvements to the highway, the route via Holwell provides the shortest route to the 'A' road network.

1.16 The route via Holwell also offers a lower impact, especially to vulnerable road users such as pedestrians, cyclists and horse riders. Off peak traffic flows on this road are also relatively light.

1.17 Split construction traffic routing will increase the potential impact in terms of the numbers of residents affected and will also be more difficult to manage so is not recommended.

2 Introduction

2.1 Stomor Ltd. has been commissioned by Pirton Parish Council (PPC) to review proposals for construction traffic routing in relation to a proposed development for up to 82 dwellings by Cala Homes on land at Holwell Road, Pirton.

2.2 The site is located off the south side of Holwell Road on the eastern side of Pirton village. A site location plan is provided in **Appendix A**.

2.3 This report is prepared in order to appraise various proposed options for routing of construction traffic to and from the site. A Construction Traffic Management Plan (CTMP) has been submitted by Cala Homes to discharge Condition 6 of Outline Planning Permission reference 15/01618/1.

2.4 We are aware that Cala Homes has liaised with Hertfordshire County Council (HCC) as highway authority at some length on the emerging CTMP. This report is set in the context of these ongoing discussions and the latest advice from HCC whom we have liaised with informally on the CTMP.

2.5 Original CTMP proposals to route construction traffic into and out of the site via Holwell have been scrutinised based on the suitability of this route to accommodate construction traffic.

2.6 Subsequently, alternative route options have been considered by Cala and HCC which include the original proposal (i.e. in/out via Holwell) and routing construction traffic via Pirton either inbound or outbound only. This would split construction traffic routing.

2.7 PPC have expressed concern regarding routing of construction traffic via Pirton based on the unsuitability of roads in the village. In particular PPC is concerned about the effect of routing construction traffic:

- Past residential properties that have no footways;
- Past on street parking, sometimes combined with the above point;
- Via sections of road that are narrow, have limited forward visibility and little potential for upgrade; and
- On roads that have no speed restraint measures.

2.8 This report considers the latest CTMP and HCC advice in the context of concerns raised by PPC and concludes on a preferred option for construction traffic routing.

2.9 In addition to the local issues specific to Pirton and Holwell, this report also considers the potential implications of routing construction traffic via roads beyond the local area and via other settlements.

2.10 We have visited the site and observed each of the traffic routes referred to in this report. The routes in Pirton and Holwell have been reviewed in both directions.

3 Existing Position

3.1.0 Highway Authority Policy

3.1.1 Prior to preparing this report we have liaised informally with HCC regarding their policy on construction traffic routing. The advice received clearly indicated that the preferred route would be the shortest distance to and from a nearby 'A' road. This report considers this key advice throughout.

3.2.0 Traffic flows

3.2.1 We have reviewed a range of documents in relation to this proposed development including the original Transport Assessment (TA) for the site prepared by Gladman in 2015. This provides a range of baseline data that we have used as the reference point.

3.2.2 From the TA we have identified 2015 AM and PM peak hour traffic flows past the site entrance on Holwell Road to be as follows:

	AM peak	**PM peak**
Vehicles	0800-0900	1700-1800
Northbound	40	48
Southbound	58	31

Table 1: Observed Traffic flows at site entrance 2015

3.2.3 Table 1 demonstrates that observed traffic flows at peak times at the site entrance are less than 1 vehicle per minute in each direction. This volume of traffic is very low.

3.2.4 In reality traffic flows will not be as evenly spread but it should be noted that the flows in Table 1 are for peak hours. Off peak flows would be lower[1] and we would expect the CTMP to confirm that construction traffic would only be permitted off-peak.

3.2.5 In addition we have reviewed the timetable for the only bus service on this route, service 89 (Hitchin to Lower Stondon via Holwell and Pirton – operated by Centrebus). There are 3-4 services passing the site during off-peak hours. Some of the services terminate in Pirton and return via Shillington so, effectively, pass the site twice. A single decked bus is operated on this route.

3.2.6 The CTMP for the site indicates that at peak times the site could receive 25-30 deliveries a day. No detailed information is available on the likely pattern of deliveries but it is assumed this will vary throughout the development period and vehicle sizes will also vary.

3.2.7 Assuming weekday delivery period of 09.30 to 15.00, in simple terms, this could equate to approximately 5 deliveries per hour or 1 every 12 minutes.

3.2.8 The data in Table 1 and additional information above gives a good indication that weekday traffic flows at the site entrance, and therefore on Holwell Road, are likely to be low. Table 2 illustrates typical weekday hourly traffic flows on Holwell Road with construction traffic.

	Vehicle type	Typical weekday off-peak hour flows
Northbound	Cars/vans	48
	Bus	1
	Construction traffic out	5
	Total	**54**
Southbound	Cars/vans	58
	Bus	1
	Construction traffic in	5
	Total	**64**

Table 2: Potential traffic flows at site entrance 2020

[1] Peak flows are used in this report which over-estimate off-peak traffic but will allow for the gradual growth of resident trips from the development site as houses are occupied.

3.2.9 It is also noted that deliveries are proposed on Saturday mornings between the hours of 08.00 and 13.00. Whilst no survey data is available for Saturdays, the potential traffic flows on Holwell Road set out in Table 2 are likely to be similar.

3.3.0 Construction Traffic Management Plan - Latest Position 17th May 2017

3.3.1 We have reviewed the CTMPs and corresponding advice from HCC on them. It is clear from this ongoing discussion that the highway authority accepts and supports the latest CTMP with the following key points:

- Routing of construction traffic to and from the A600 via Holwell;
- Swept Path Analysis demonstrates delivery vehicles can use this route;
- Installation of two laybys in Waterloo Road and narrow section of Holwell Road to allow passing places (exact locations to be determined);
- Clearance/management of tree/hedgerow obstructions;
- No deliveries before 09.30 and after 15.00 to avoid weekday peak hours and the afternoon school travel peak;
- No deliveries before 08.00 and after 13.00 on Saturdays with no deliveries at all on Sundays/Bank Holidays;
- Agreed size of vehicles at 12m Heavy Goods Vehicles. Larger vehicles or occasional deliveries outside above delivery hours to be agreed with HCC[2];
- A 'two-strike' approach to deliveries whereby any contractor not adhering to routing or time restrictions more than once will be removed from the site;
- A gateman will manage routing and site manager to manage delivery bookings.

3.3.2 HCCs position clearly reflects their policy regarding promoting access via the shortest possible route to the 'A' road network. Our initial view is this is the correct approach, subject to considering the highway network on each route, potential traffic management and likely impact.

[2] The CTMP refers to a mix of vehicle types ranging from 3.5t dropside vans (5.3m length) to a mobile crane (12.3m length)

3.3.3 The CTMP sets out daily average number of vehicles and that a mix and range of vehicle types of vehicles will be used. A more detailed delivery programme is not available so it is not possible to identify the length of time that the maximum flow of construction traffic will extend for.

3.3.4 The following section assesses each potential route and we conclude with our recommendation on construction traffic routing.

4. Route Impact Appraisal

4.1 We have reviewed the local highway network on all of the routes examined in this report. It clear that there are constraints on all routes, as would be expected on rural roads. In particular, carriageway widths are frequently narrower than would normally be required for larger vehicles to pass (i.e. 5.5m minimum) and there are no restrictions on vehicle access other than 30mph speed limits.

4.2 This section summarises the key features of the potential construction traffic routes in Pirton and Holwell villages with reference to other considerations on the routes beyond both villages.

4.3 An overall assessment of the Personal Injury Accident (PIA) record has been made of all potential routes via reference to information online at Crashmap.co.uk (see **Appendix B**). This provides an indication of the relative safety of each route over the period 1999 to 2016 by summarising all recorded PIAs resulting in slight, serious or fatal injuries.

4.4 The assessment also considers the number of road junctions passed on each route as the PIA information indicates a clear relationship between junctions and number of PIAs.

4.5 Our assessment considers whether each route could reasonably be used by construction traffic, what may be required to make this happen and, in conclusion, the preferred route option.

4.6 The following sections sets out our appraisal of the various, potential construction traffic routes to the site. This appraisal takes into account the above information, site observations and any additional information that could be considered relevant to a CTMP.

4.7 Route 1 – Via Holwell to A600 Bedford Road

Route appraisal

4.7.1 The total distance of this route to the nearest 'A' road (i.e. A600) is approximately 2 miles or 5 minutes' drive during the off-peak period. The speed limit in Holwell is limited to 30mph.

4.7.2 The route passes through Holwell village only. Census 2011 data indicates that Holwell has a population of 361. Our observations did not suggest there were any shops or services in the village that would generate significant pedestrian activity.

4.7.3 Route 1 passes an estimated 90 properties of which 3 have no access to a footway and an estimated 11 have no off-street parking.

4.7.4 The section of the route through the village itself is less than 1 mile in length of which approximately half of this route is managed by some form of traffic calming (either speed humps or 'give way to oncoming vehicles').

4.7.5 Forward visibility along the route is generally good including around the bend at the church where it is possible to see over an existing wall towards oncoming traffic.

4.7.6 There is a footway on at least one side of the carriageway throughout almost all of the village. The exception being the extreme southern end of Pirton Road and Waterloo Lane where carriageway widths can be less than 4.0m. Some informal widening of the carriageway has occurred as a result of vehicles overrunning carriageway edges so actual usable widths are greater than 4.0m in places.

4.7.7 Based on site observations it is estimated that only 3 residential properties are located on Waterloo Lane and no pedestrian activity was observed at the southern end of the village on three visits during peak and off peak periods.

4.7.8 Site observations also confirmed traffic movements through the village at off-peak times to be light. Some on-street parking occurred on Holwell Road but there was sufficient space to pass and pull in to give way to oncoming vehicles.

4.7.9 The route to/from the development site passes four junctions including the priority 'T' junction with the A600 Bedford Road. Observations suggest that traffic movements at all junctions except the A600 were light.

4.7.10 PIA information obtained from CrashMap.co.uk indicates one slight accident occurring along the entire route between 1999 and 2016. This occurred at the junction of Rand's Meadow and Holwell Road. In our experience this is an extremely low level of PIAs for a length of route this long over 18 years. It underlines the relatively lightly trafficked use of the route, effective traffic calming features and 'natural' speed reducing nature of roads at the southern end of Holwell.

4.7.11 The main constraints to vehicle movements on this route are; a) the width of the carriageway at the southern end of Pirton Road and in Waterloo Lane especially and: b) visibility at the Waterloo Road bends.

4.7.12 Forward visibility along Pirton Road is good, so drivers can make early decisions to give way to allow oncoming vehicles to pass. There are opportunities for vehicles to wait where road widths have localised widening. The 'give way to oncoming vehicles' traffic calming features on Pirton Road formalise this arrangement in its middle section.

4.7.13 Waterloo Lane is a more constrained section of the route as visibility on approach to the bends at either end is restricted and widths at each bend and the straight section would prevent two vehicles passing without one having to give way and move to one side.

4.7.14 In our observations traffic flows were light enough during off peak periods for this not to occur. We also observed that speeds at the Waterloo Road bends were low, as would be expected by restricted forward visibility.

4.7.15 South of Holwell, Holwell Road itself has generally good forward visibility and the available width would allow vehicles to pass by using local variations in width. Height of vegetation/crops on the bend heading towards Pirton does not significantly affect visibility.

4.7.16 At the approach to the site visibility around the bend into Pirton is restricted but observations suggest drivers adjust speeds accordingly. It is noted that the proposed site access will change the bend significantly.

Construction traffic management

4.7.17 Having visited all of the potential routes it is clear that Route 1 is the shortest route to the 'A' road network and passes the smallest number of junctions and properties. The route through Holwell is traffic calmed either by design or by the nature of the roads. There is also footway available for the majority of the village. The overall effect is reflected in the very low number of PIAs recorded on this route.

4.7.18 Notwithstanding the above, it is noted that the highway is constrained and even for the relatively short term nature of construction traffic use, allowing for low traffic volumes and off-peak use, some measures should be considered to minimise potential impact.

4.7.19 The main issues for consideration on the route would appear to be:

- Width and visibility at the south end of Holwell and Waterloo Lane especially; and
- Management of vehicle movements to avoid conflict.

4.7.20 We note from the latest version of the CTMP that swept path analysis demonstrates that a construction vehicle of 12m length is able to use the route and negotiate all bends and that HCC have accepted this analysis.

4.7.21 On this basis the focus of traffic management should consider how to avoid construction vehicles needing to pass each other on narrow roads and at the same time ensuring other vehicles are able to pass and/or wait safely to allow construction vehicles to pass or vice versa.

4.7.22 Our observations indicate that there is a sufficient length of Holwell Road east of Holwell village that could be used for larger construction vehicles to wait and call in to the site via radio or mobile phone. The site manager could advise whether any construction vehicles have left the site prior to the call and instruct a vehicle to wait until the departing vehicle has passed or, if no vehicle has departed, proceed to the site.

4.7.23 There is sufficient length of Holwell Road at this point to accommodate at least three waiting construction vehicles (assuming 12m length each) and allow passing vehicles to overtake safely. Forward visibility is good.

4.7.24 The southern end of Pirton Road has some localised widening that should enable vehicles to stand and allow larger vehicles to pass or vice versa. Some minor widening improvements in existing wider sections of the road would improve this situation. This would be subject to availability of highway land and detailed design.

4.7.25 At the southern end of Pirton Road (as it meets Waterloo Lane) there is potential for an existing, informal, wider section of the road to be upgraded to a more formal layby. This would allow vehicles to wait whilst oncoming vehicles heading north from Waterloo Lane passed. It is estimated that a width of 6m could be achieved in this location.

4.7.26 Our observations also suggest that there is potential for localised widening on both sides of Waterloo Lane to improve passing space[3]. Examination of highway boundary records and more detailed design would be required but sufficient passing space may be achievable to allow a construction vehicle and car/small van to pass.

4.7.27 At the western end of Waterloo Lane an informally widened section could be formalised into a layby or passing space of about 6m width. This would allow vehicles to wait whilst eastbound vehicles passed.

4.7.28 Where Waterloo Lane meets Holwell Road there is potential for some localised kerb widening and/or passing space to be provided. There is evidence of kerb/verge overrun in this location as a guide to the extent of widening that could be provided.

4.7.29 On Holwell Road there is potential for localised widening at a number of locations. Again, subject to land availability and detailed design localised widths of approximately 6m could be achieved.

4.7.30 In conclusion, there is scope for both management of construction traffic and mitigation of its impact on this route. It is the shortest route to the nearest 'A' road and impacts the lowest number of properties and vulnerable road users. Holwell is also traffic calmed in and has a very low accident history record.

4.8 Route 2 – To the A505 via Royal Oak Lane/Walnut Tree Road, Pirton

Route appraisal

4.8.1 The total distance of this route to the nearest 'A' road (i.e. A505) is approximately 3.5 miles or 7 minutes' drive during the off-peak period. The speed limit in the village is limited to 30mph. The route uses the B655 to access the A505 in Hitchin.

4.8.2 The route travels through Pirton village which has a range of services and facilities including local shop, public houses, post office and school. The 2011 Census data indicates that Pirton's population is 1,274 so a reasonable level of pedestrian activity could be expected throughout the day in the village.

4.8.3 The route passes an estimated 90 properties of which over 50 have no access to a footway and an estimated 8 have no off-street parking. The route also passes an estimated 40 properties in Hitchin.

[3] Subject to highway land being available.

4.8.4 The section of the route through the village itself is less than 1 mile in length. None of the route within Pirton is traffic calmed.

4.8.5 Forward visibility along the route is generally good with the notable exception of a narrow section at the southern end of Walnut Tree Road where the road narrows next to a building and visibility is significantly reduced.

4.8.6 The most notable highway feature along Holwell Road within Pirton is the lack of footway on either side of the road. In addition the row of 10 properties immediately adjacent to the site are characterised by front doors opening directly onto the carriageway along with sharing carriageway space for on-street parking and waste bin storage which reduces the carriageway to singletrack (see photograph below).

Holwell Road, Pirton looking west from the site access.

4.8.7 There are a further 4 properties on Holwell Road set back further from the road but also with no footway access.

4.8.8 Royal Oak Lane forms the next section of the route within Pirton. The most notable characteristic of the northern end of Royal Oak Lane is the lack of footway on either side at its northern end for approximately 250 metres, despite there being 29 residential properties on both sides. The carriageway itself varies in width from 4.3m to 5.3m along the section with no footway and some residents have installed posts to prevent vehicle overrun onto private gardens.

4.8.9 The northern end of Royal Oak Lane is also the narrowest part of the road which combines with it being the junction with Holwell Road and the beginning of the section of the road with no footway. Carriageway width at the junction with Holwell Road varies between 4.3m and 4.5m. The photograph below demonstrates the conflict that occurs at this junction which is used by buses – note that the small amount of available footway is used for parking.

Royal Oak Lane, Pirton looking south from Holwell Road

4.8.10 The remaining section of Royal Oak Lane has a footway on one side only but it should be noted that this is narrow in places and insufficient for pushchairs and wheelchairs.

4.8.11 Royal Oak Lane meets High Street and Walnut Tree Road at a crossroad with Hambridge Way forming a fourth arm to this junction. Site observation indicated regular pedestrian activity in this area, including along the section of Royal Oak Lane with no footway. Horses were also observed on this section of the route.

4.8.12 South of this junction Walnut Tree Road links to Hitchin Road but at its southern end there is no footway and the localised narrowing referred to above.

4.8.13 Site observations also confirmed traffic movements through the village at off-peak times to be light with relatively some on-street parking.

4.8.14 The route to/from the development site passes nine junctions including the priority 'T' junction with the B655 Barton Road and roundabout junction with the A505 in Hitchin Observations suggest steady a flow of traffic at the B655 junction, significant flows at the A505 junction and light flows elsewhere.

4.8.15 It should be noted that there is an alternative route between the B655 and A505 via the very narrow Carters Lane but it is not considered suitable for large construction vehicles because of its width and form of junction with the A505.

4.8.16 In addition, use of the B655 roundabout junction with the A505 in Hitchin would require construction vehicles to make a very tight turn. The suitability of this junction would require swept path analysis to check this movement is possible by 12m vehicles.

4.8.17 PIA information obtained from CrashMap.co.uk indicates 45 slight PIAs occurring along this entire route between 1999 and 2016 of which 5 occurred within Pirton. In addition a further 9 serious PIAs occurred on the route (2 in Pirton) and 2 fatal PIAs (0 in Pirton).

4.8.18 Analysis of the PIA data and route suggests that the higher number of accidents can be expected due to the lack of traffic calming, lack of pedestrian facilities, relatively wide and/or straight roads outside Pirton, more junctions and higher traffic flows on the B655.

4.8.19 The main constraints to vehicle movements on this route are the lack of pedestrian facilities (our observations suggested regular off-peak pedestrian use) and, in some places, constrained carriageway widths. Use of the route by horse riders and cyclists can also be expected as Hambridge Way provides traffic free access between Pirton and Ickleford/Hitchin.

4.8.20 Using this route would require construction traffic to pass through both Pirton and the south west corner of Hitchin before reaching the 'A' road network.

4.8.21 In order to minimise the impact of this route our analysis suggests that a significant amount of mitigation would be required to ensure vulnerable road users (i.e. pedestrians, cyclists and horse riders) weren't unacceptably disadvantaged.

4.8.22 In particular residents and visitors to the properties on Holwell Road would be vulnerable due to construction traffic passing them as they exited front doors or parked cars. If parked cars were absent then the space in front of properties and front doors would be utilized as carriageway space for passing vehicles.

4.8.23 The junction of Holwell Road and Royal Oak Lane has evidence of vehicle overrun so some localized widening would potentially address this but this may increase vehicle speeds to/from the north end of Royal Oak Lane where pedestrians are required to use the carriageway for 250m.

4.8.24 In Royal Oak Lane itself, there is generally width to allow vehicles to pass (although the road narrows at its northern end) but the main concern at all times would be the impact on pedestrians walking in the carriageway as this is one of the main route into the centre of Pirton and to the local school.

Construction traffic management

4.8.25 Route 2 is a longer distance to/from the 'A' road network and passes more junctions and more properties than Route 1. None of the route through Pirton is traffic calmed and, of greatest concern, approximately 250m of the route on Holwell Road and Royal Oak Lane has no footway.

4.8.26 The overall route has a significantly higher number of PIAs compared to Route 1.

4.8.27 Traffic flows within Pirton were observed to be relatively light. Flows on the B655 are significantly higher.

4.8.28 The main issues for consideration on the route would appear to be:

- Lack of pedestrian facilities within Pirton on much of the route;
- Management of vehicle speeds to minimise impact;
- Width constraints at the junction of Royal Oak Lane and Holwell Road; and
- Width and visibility constraint at the southern end of Walnut Tree Road.

4.8.29 Our observations suggest that provision of a footway on one side of each road at a minimum width of 1.5m would reduce road widths in Holwell Road and Royal Oak Lane to approximately 4.0m.

4.8.30 This would reduce carriageway space to the extent that there would be long sections of road without sufficient width for vehicles to pass within the village.

4.8.31 Displacement of on-street parking on Holwell Road would need to be considered if a footway was provided. In addition, the design and construction of any footway on Holwell Road would need to ensure it did not give rise to drainage problems for those houses directly abutting Holwell Road. Footway space provided via road markings or different surface materials only is still likely to be used as carriageway by vehicles.

4.8.32 An alternative option would be to provide traffic calming features along those sections of the route without footway provision in order to keep vehicle speeds low. This would manage traffic in a similar way to the traffic calming in Holwell.

4.8.33 Experience suggests design and provision of footway and/or traffic calming features can take a considerable amount of time due to the number of properties involved. It would be unreasonable to do so without significant consultation. It is also reasonable to assume that this will have a significant cost.

4.8.34 The extent of works required to mitigate potential impact on vulnerable road users on Holwell Road and Royal Oak Lane is not considered viable for relatively short term construction traffic routing.

4.8.35 The lack of footway and localised narrowing on Walnut Tree Road is considered less of an issue and pedestrian movements are likely to be very low. Notwithstanding, some form of speed reduction measures or temporary signing should be considered in this location to mitigate construction traffic impact and the concerns set out above apply.

4.8.36 The remaining section of the route beyond Pirton has not been appraised in detail but routing construction traffic via a longer route via more rural roads and other settlements is not considered to be good practice, especially given the PIA information on this route.

4.8.37 In conclusion, the risk to vulnerable users is significantly higher on this route and mitigation would not appear to be cost effective or deliverable within the required timeframe, further underlining the unsuitability of the route.

4.9 Route 3 – To the A600 via West Lane, Pirton and Shillington

Route appraisal

4.9.1 The total distance of this route to the A600 at Henlow Camp is approximately 5.5 miles or 13 minutes' drive during the off-peak period. The speed limit in Pirton is limited to 30mph.

4.9.2 The route uses Shillington Road via Apsley End and then onto Shillington continuing through Lower Stondon and Henlow Camp. This route affects four settlements.

4.9.3 The route uses West Lane and Shillington Road in Pirton, passing an estimated 80 properties of which 14 have no access to a footway and 15 have no off-street parking. The route also passes properties (including local shops and services) in Apsley End, Shillington, Lower Stondon and Henlow Camp.

4.9.4 The section of the route through Pirton itself is less than 1 mile in length. None of the section within Pirton is traffic calmed.

4.9.5 Forward visibility along the route is generally good with the notable exception of the westbound approach to Shillington Road from West Lane where on street parking obscures visibility on a bend and reduces width to single carriageway.

West Lane, Pirton looking west towards Shillington Road junction

4.9.6 The route to/from the development site passes 24 junctions including the roundabout junction with the A600. Observations suggest light traffic flows on all routes except the A600.

4.9.7 PIA information obtained from CrashMap.co.uk indicates 31 slight PIAs occurring along this entire route between 1999 and 2016 of which 4 occurred within Pirton. In addition a further 11 serious PIAs occurred on the route (0 in Pirton) and 1 fatal PIAs (0 in Pirton).

4.9.8 Analysis of the PIA data and route suggests that the higher number of accidents can be expected due to the lack of traffic calming, more junctions and passing through more residential areas.

4.9.9 As with Route 2, the most notable highway feature along Holwell Road within Pirton is the lack of footway on either side of the road. The issues affecting properties on that section are set out in the Route 2 appraisal and not repeated here.

4.9.10 The junction of West Lane and Shillington Road is constrained by narrow carriageway width and lack of or very narrow footways in places.

4.9.11 West Lane is lightly trafficked and with minimal on-street parking until a row of terraced houses and a bend at the junction with Shillington Road. Visibility is reduced at this point and vehicles passing parked cars are required to do so without visibility of oncoming vehicles.

West Lane, Pirton looking east from Shillington Road junction

4.9.12 Carriageway width at the junction with Shillington Road is minimal for two lanes and there is evidence of overrunning of the verge and private driveway.

4.9.13 The main constraints to vehicle movements on this route in Pirton are the lack of pedestrian facilities on Holwell Road and traffic management on West Lane.

4.9.14 Using this route would require construction traffic to route through more populated areas and over a significantly longer distance than Route 1.

4.9.15 The overall route has a significantly higher number of PIAs compared to Route 1.

4.9.16 In order to minimise the impact of this route our analysis suggests that mitigation would be required to ensure vulnerable road users (i.e. pedestrians, cyclists and horse riders) weren't unacceptably disadvantaged in Holwell Road (see Route 2).

4.9.17 In addition, the visibility and width constraints at West Lane and its junction with Shillington Road suggest that some form of traffic management or calming would be required.

Construction traffic management

4.9.18 The main issues for consideration on the route would appear to be:

- Lack of pedestrian facilities within Pirton on Holwell Road;
- Management of vehicle speeds to minimise impact; and
- Width constraints at the junction of West Lane and Shillington Road.

4.9.19 The potential mitigation for Holwell Road is set out in the previous section of this report.

4.9.20 In West Lane our observations suggest that measures to manage traffic on approach to the bend and junction with Shillington Road will be difficult. This is largely because the main constraint is caused by residents' on-street parking.

4.9.21 Removal of this on-street parking is not considered to be viable and traffic calming to keep speeds down is only a partial solution to the lack of forward visibility and potential conflict with oncoming vehicles and residents accessing parked cars.

4.9.22 Our overall conclusion is that an acceptable short term solution would be difficult to achieve.

4.9.23 Some localised widening of the West Lane junction with Shillington Road could be undertaken but this would not address the visibility concern on approach to the junction from the east.

4.9.24 As for Route 2, experience suggests design and provision of footway and/or traffic calming features can take a considerable amount of time due to the number of properties involved. It would be unreasonable to do so without significant consultation. It is also reasonable to assume that this will have a significant cost.

4.9.25 The extent of works required to mitigate potential impact on vulnerable road users on Holwell Road and West Lane is not considered viable for relatively short term construction traffic routing.

4.9.26 The remaining section of the route beyond Pirton has not been appraised in detail but routing construction traffic via a longer route via more rural roads and other settlements is not considered to be good practice, especially given the PIA information on this route.

4.9.27 In conclusion, the risk to vulnerable users in Pirton is higher on this route and mitigation would not appear to be cost effective or deliverable within the required timeframe, further underlining the unsuitability of the route.

4.9.28 Furthermore the route passes through others settlements and it is not considered reasonable or necessary to expose residents and businesses to construction traffic for a site located on the east side of Pirton.

4.10 Route 4 – To the A6 via West Lane, Pirton and Barton-le-clay

Route appraisal

4.10.1 The total distance of this route to the A6 at Barton-le-Clay is approximately 5.2 miles or 10 minutes' drive during the off-peak period. The speed limit in Pirton is limited to 30mph.

4.10.2 The route uses Shillington Road via Apsley End and then via Higham Road where it continues past the northern side of Barton-le-Clay. This route affects three settlements.

4.10.3 The route issues and potential mitigation as affects Pirton are set out above under Routes 2 and 3 and not repeated here.

4.10.4 The overall conclusion for this route is the same as for Route 3 insofar as the risk to vulnerable users in Pirton is higher on this route and mitigation would not appear to be cost effective or deliverable within the required timeframe, further underlining the unsuitability of the route.

4.10.5 Furthermore the route passes through others settlements and it is not considered reasonable or necessary to expose residents and businesses to construction traffic for a site located on the east side of Pirton.

4.10.6 We are aware that the potential for splitting construction traffic routing has been considered. If this route is used as part of a split route, this may result in operational difficulties as there is a significant distance between east and west access points onto the

'A' road network. It is possible that contractors would be tempted to avoid this making a split route option difficult to monitor and manage.

5 Conclusions

5.1 Stomor Ltd. has been commissioned by Pirton Parish Council to assess potential construction traffic routes to/from the proposed Cala Homes development site at Holwell Road, Pirton.

5.2 A Construction Traffic Management Plan (CTMP) has been submitted by Cala Homes to support the discharge of Condition 6 in relation to planning application reference 17/00335/1DOC.

5.3 It is understood that negotiations between Cala Homes and Hertfordshire County Council (the highway authority) have been ongoing and that the following has been agreed:

- Construction traffic routing should be to/from the site via Holwell and A600;
- Delivery times should be between 09.30 and 15.00 weekdays and 08.00 and 13.00 on Saturdays (i.e. 'off-peak');
- Localised widening in Waterloo Lane and Holwell Road to assist traffic movements; and
- Management of construction traffic bookings by site manager.

5.4 We have assessed four potential construction traffic routes to the site from the A600, A505 and A6, including the route through Holwell and three routes via Pirton and other settlements such as Hitchin, Shillington, Apsley End, Lower Stondon and Barton-le-Clay.

5.5 Traffic flows via Holwell are relatively light during off-peak periods so construction traffic vehicles will not generate significant additional two-way traffic flows.

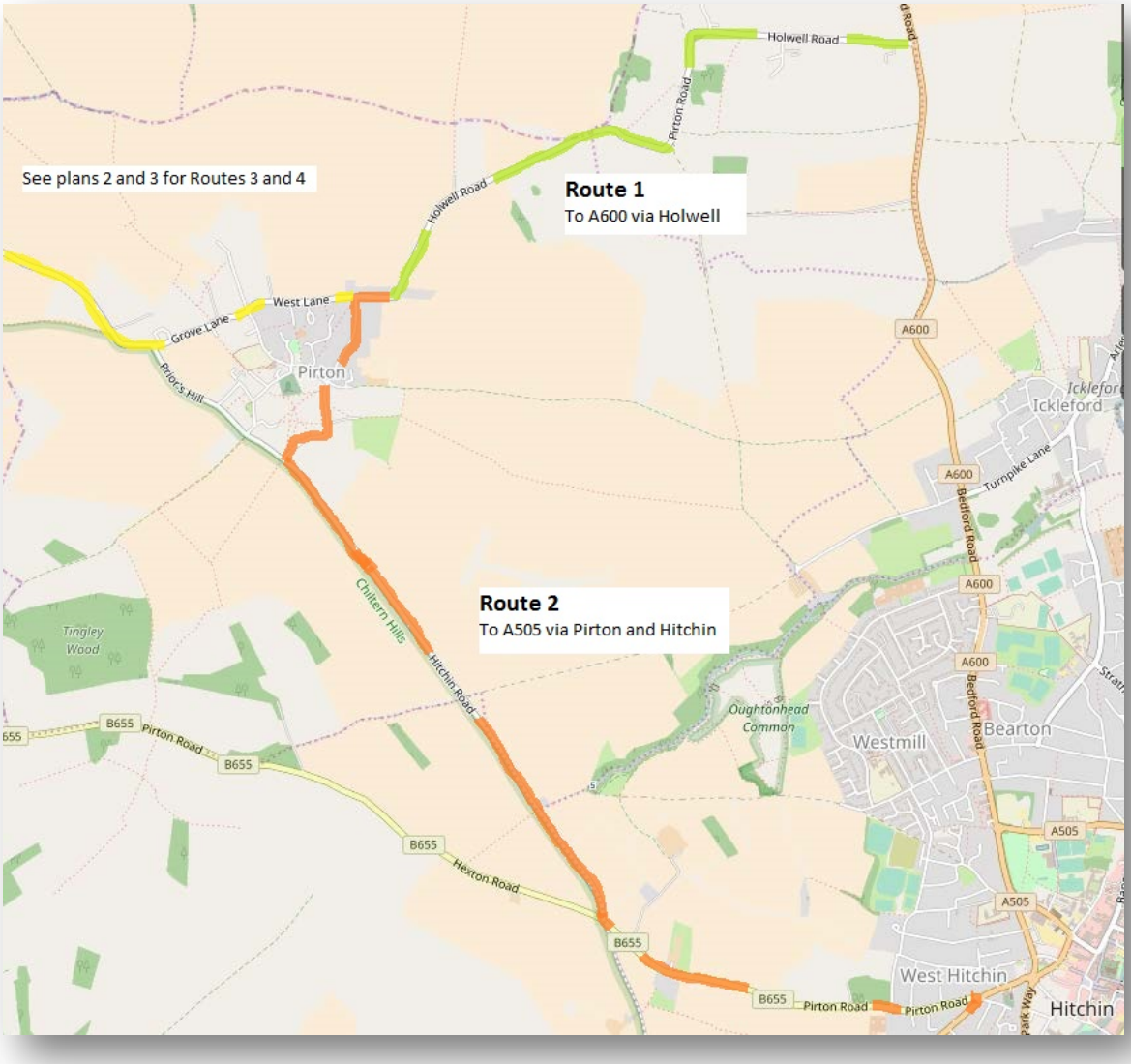
5.6 All routes via Pirton are likely to have a larger impact on vulnerable road users as a result of significant lack of footways on residential roads in the village.

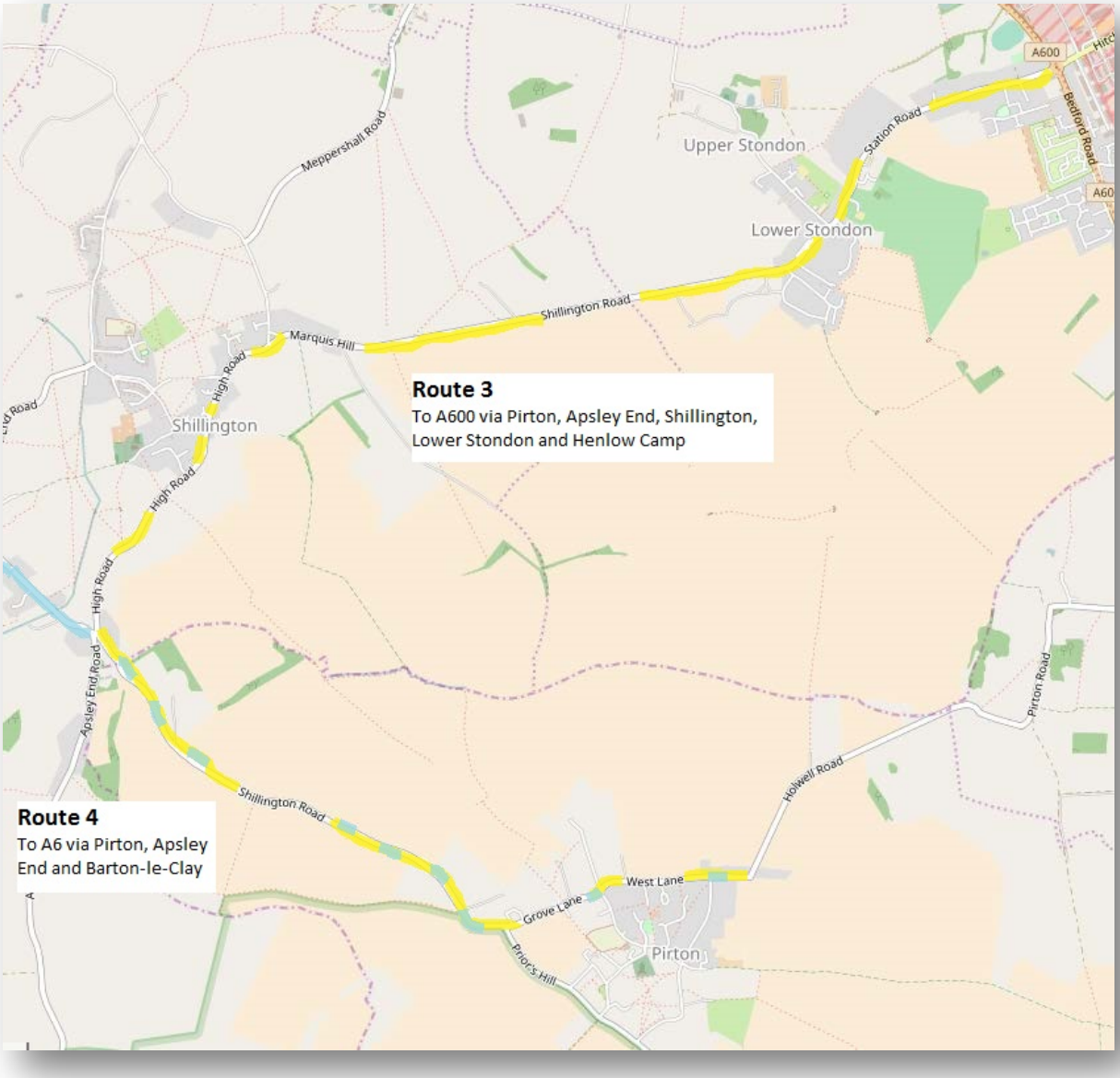
5.7 Routes via Pirton also necessitate longer distances to the 'A' road network and impact on more settlements. All routes have a significantly higher number of recorded Personal Injury Accidents over the last 18 years compared to the Holwell route.

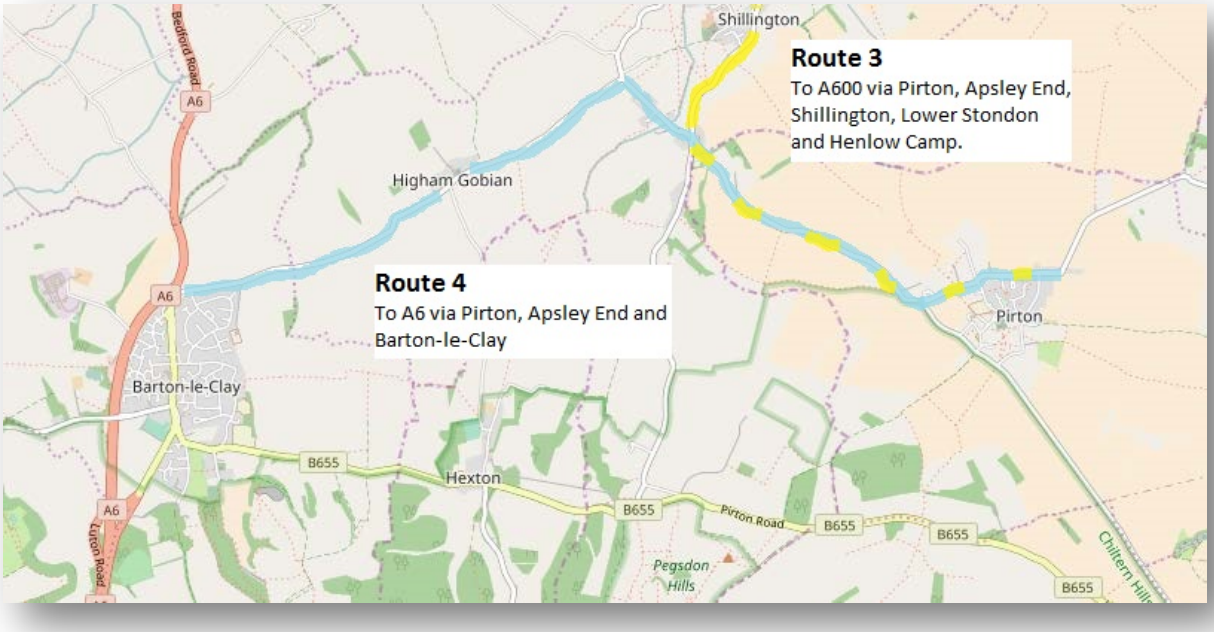
5.8 Our overall conclusion is that the route via Holwell is the shortest route and affects the smallest number of properties. With the appropriate mitigation and management it is the preferred option in highway terms.

5.9 Route 1 is, therefore, the preferred option for construction traffic to and from the site.

Appendix A – Potential Construction Traffic Routes



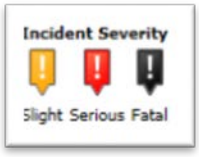




Appendix B - Personal Injury Accident Information 1999-2016

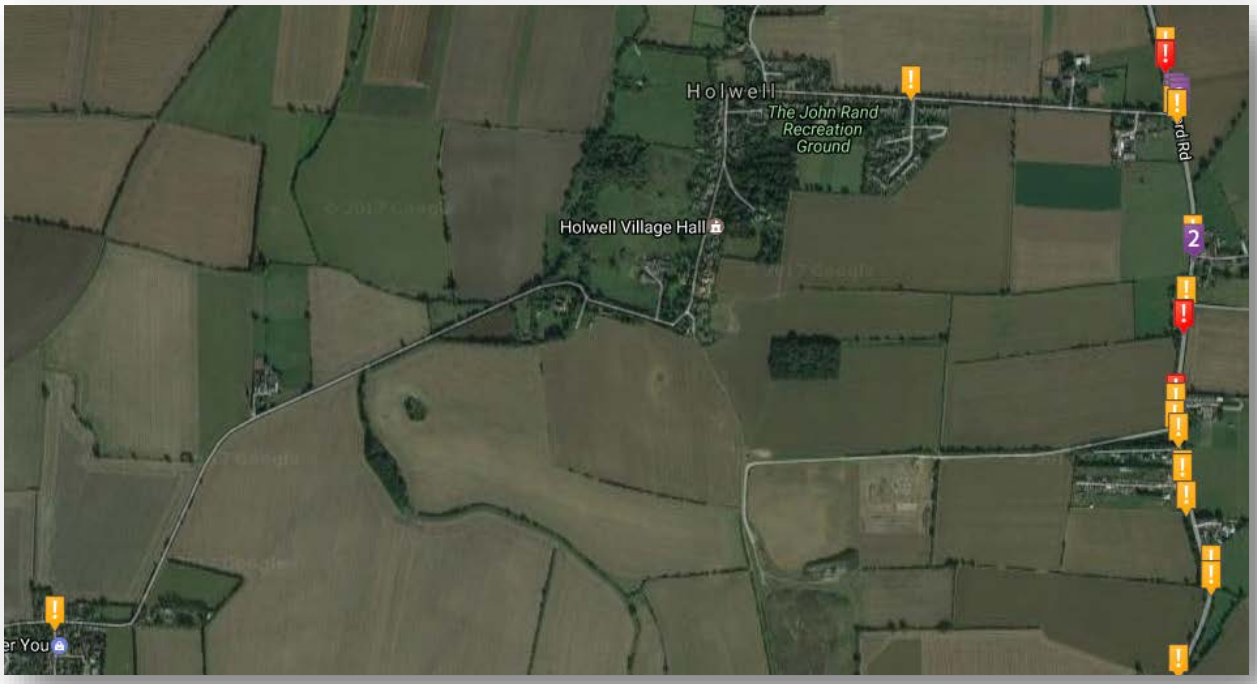
All casualty types. All vehicle types.

Key:



Route 1 – Site to A600 via Holwell

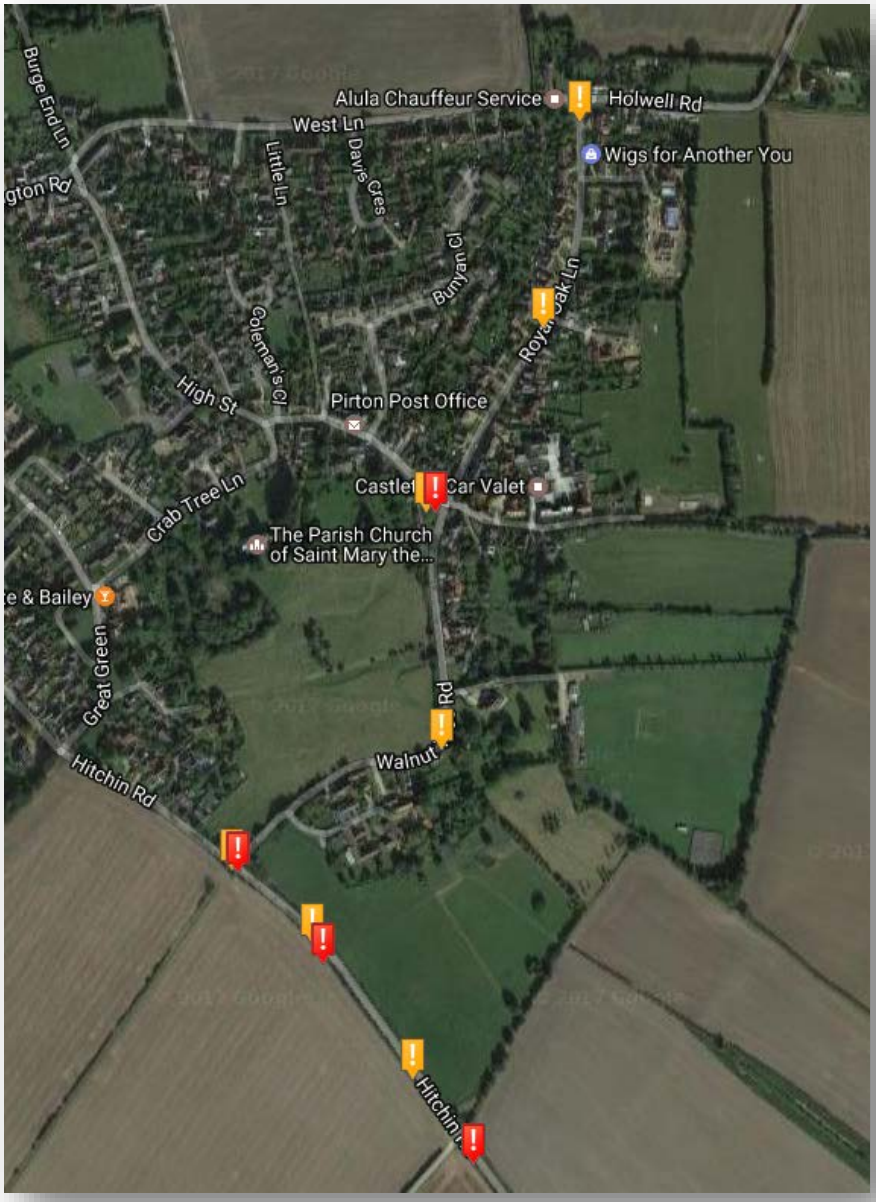
1 no. slight casualty accident



Data source: www.crashmap.co.uk/

Route 2 – Site to A505 via Pirton, B656 and Hitchin

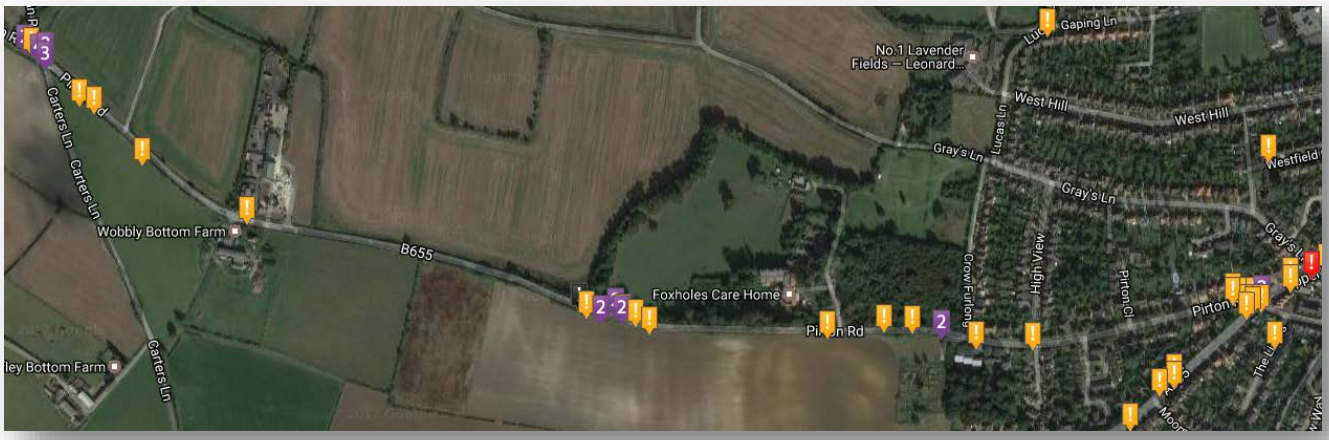
(Section 1 of 3) 7 no. slight casualty accidents + 4 no. serious casualty accidents



Data source: www.crashmap.co.uk/

(Section 2 of 3) 5 no. slight casualty accidents + 3 no. serious casualty accidents

(Section 3 of 3) 30+ no. slight casualty accidents + 3 no. serious casualty accidents + 1 fatality

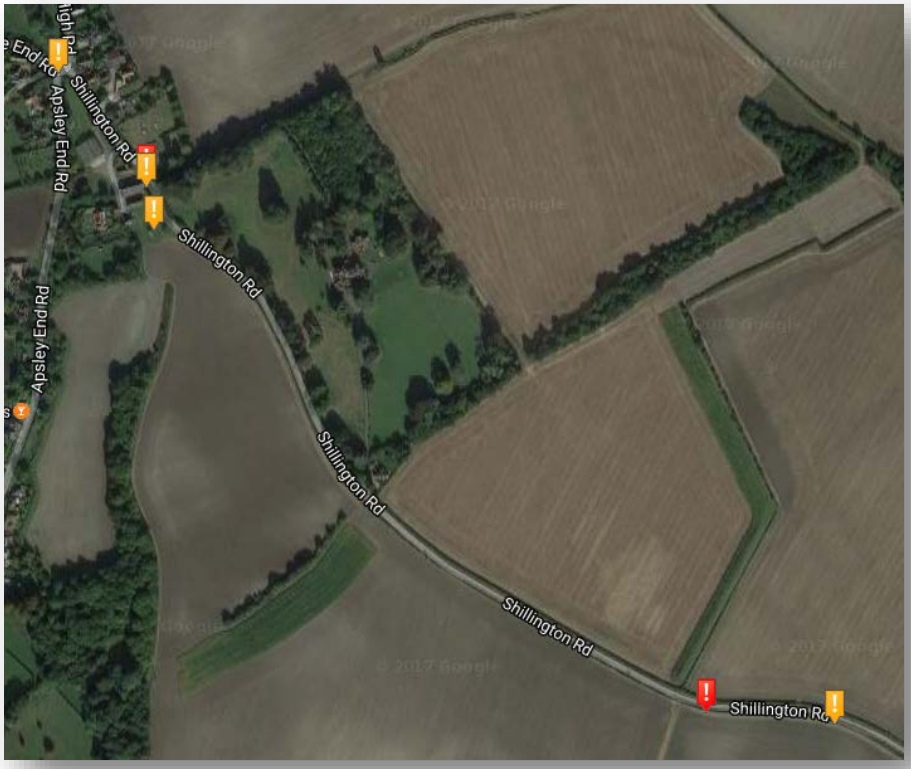


Data source: www.crashmap.co.uk/

Route 3 - Site to A600 via Pirton and Shillington

(Section 1 of 4) 7 no. slight casualty accidents

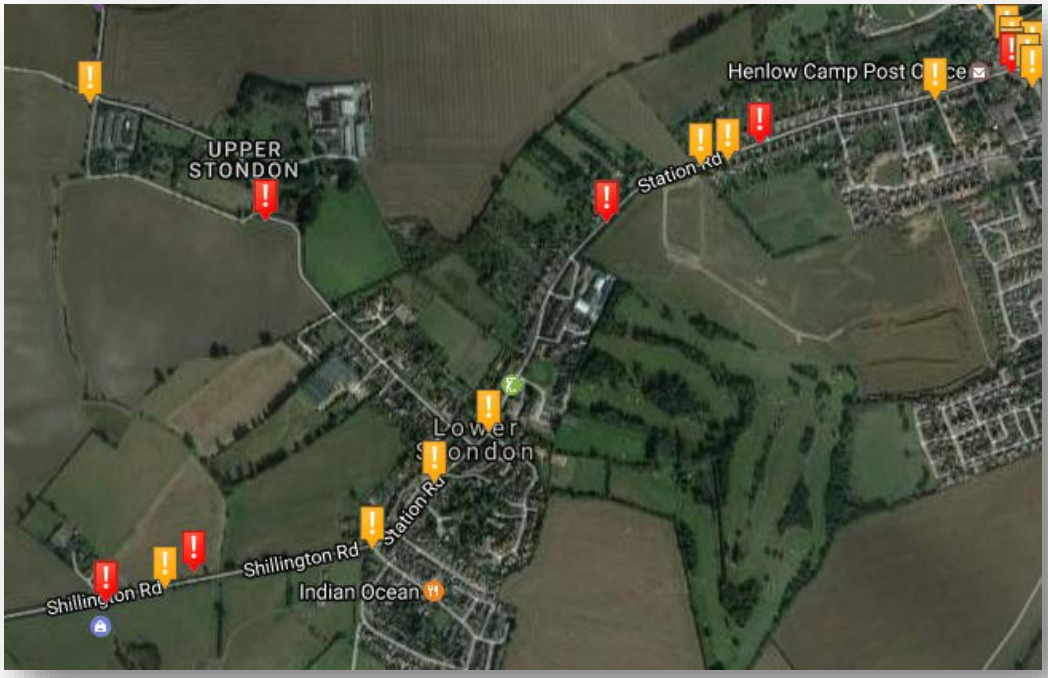
(Section 2 of 4) 4 no. slight casualty accidents + 2 no. serious casualty accidents



Data source: www.crashmap.co.uk/

(Section 3 of 4) 13 no. slight casualty accidents + 4 no. serious casualty accidents + 1 fatality

(Section 4 of 4) 7 no. slight casualty accidents + 5 no. serious casualty accidents + 1 fatality

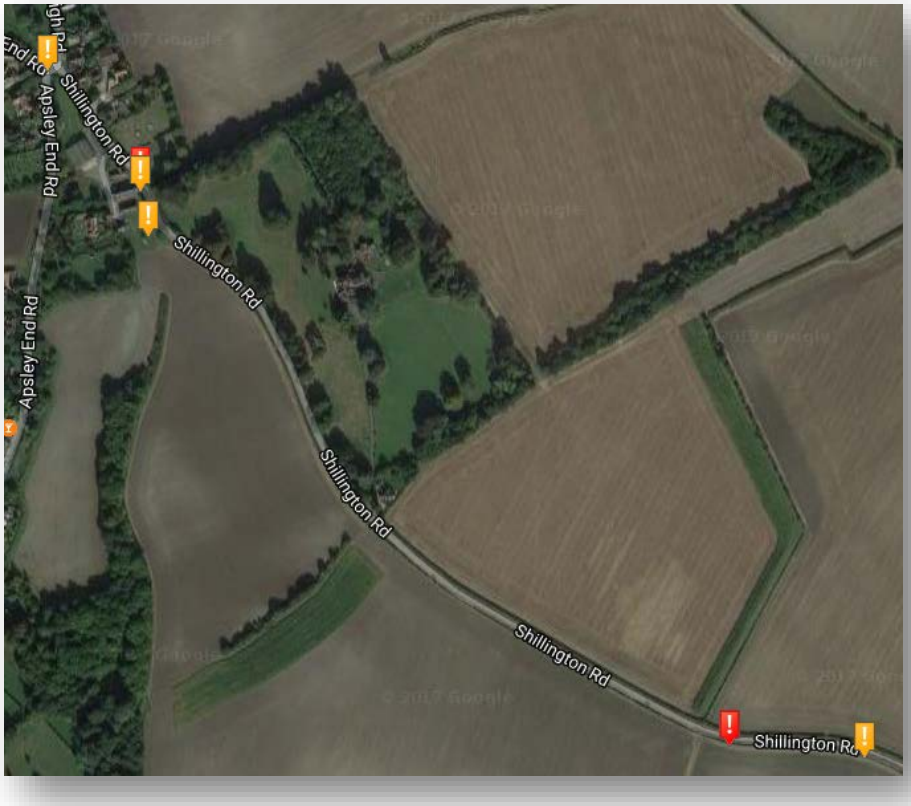


Data source: www.crashmap.co.uk/

Route 4 - Site to A6 via Pirton and Shillington

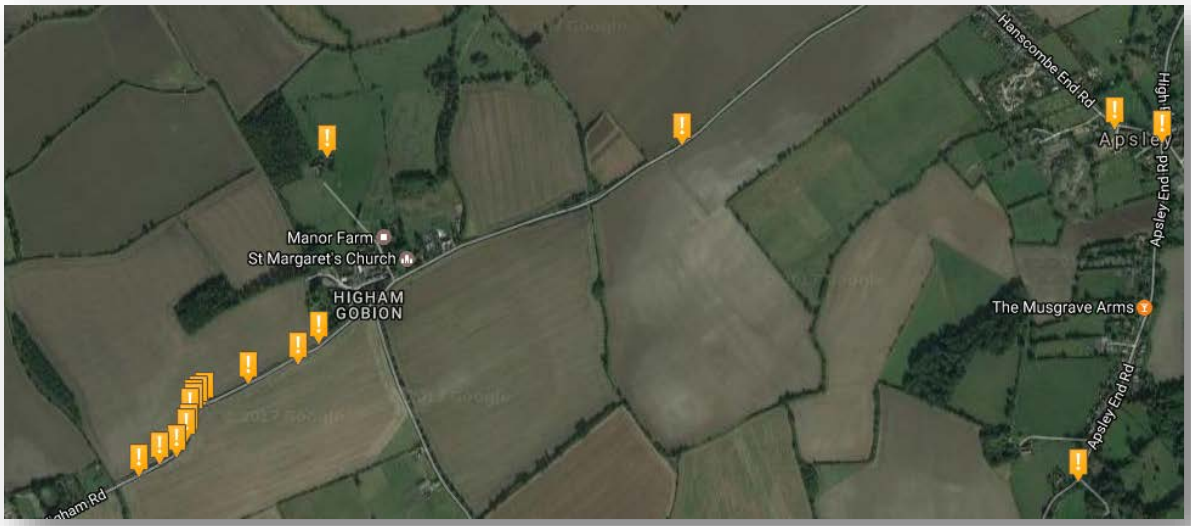
(Section 1 of 4) 7 no. slight casualty accidents

(Section 2 of 4) 4 no slight casualty accidents + 2 no serious casualty accidents

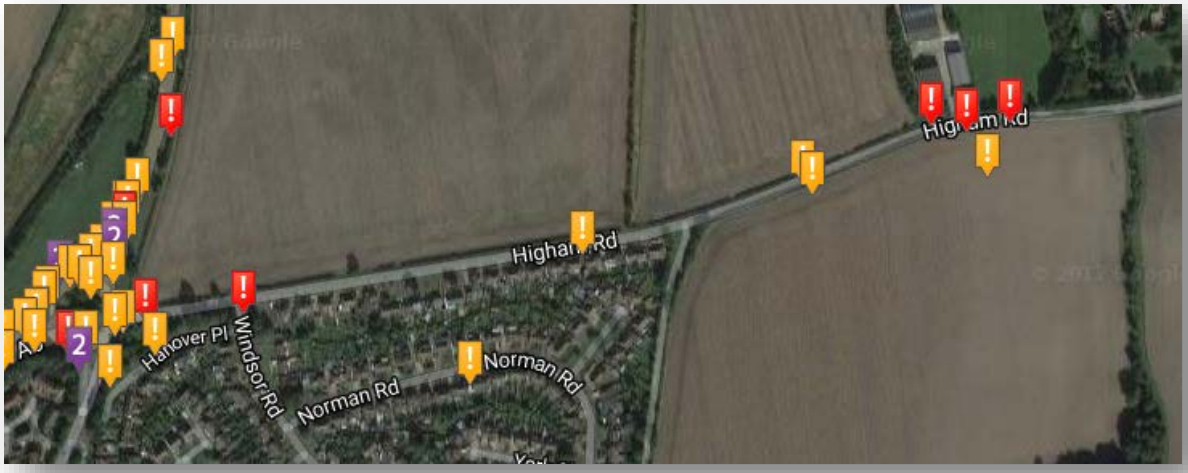


Data source: www.crashmap.co.uk/

(Section 3 of 4) 15 no slight casualty accidents + 6 no serious casualty accidents



(Section 4 of 4) 6 no slight casualty accidents + 5 no serious casualty accidents



Data source: www.crashmap.co.uk/

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