

# Report on and Analysis of Maids Moreton Traffic Survey

Conducted on  
6 December 2018



*St Edmund's Church, Maids Moreton*

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## Abstract

This report presents the results of a comprehensive traffic survey conducted in Maids Moreton on Thursday 6 December 2018 recording traffic flows at seven key junctions within the village. The survey was conducted between 0800 and 0900 and again between 1700 and 1800 at each point to allow for direct comparison with the figures recorded on Wednesday 2 May 2018 as part of Croft's Transport Assessment for outline planning application 16/00151/AOP. The key finding from this latest survey is that the traffic flows recorded are very different from and, apart from along Foscoote Rd, much heavier than those summarised by Croft. In particular:

- The traffic levels recorded travelling straight on from Foscoote Rd into Church St Maids Moreton are only around one quarter of the 116 and 64 respectively recorded by Croft for morning and evening periods. Those for vehicles coming down Foscoote Rd and turning right into Main St are also notably less;
- Croft figures show 81 vehicles travelling straight on from Church St to Foscoote Rd in the morning and 105 in the evening whereas the respective figures from this survey are only 25 and 18 vehicles respectively;
- The traffic levels recorded travelling along Main St in the morning hour show 149 vehicles at the east (Foscoote Rd) end and 159 at the west (Towcester Rd) end, 80 vehicles entering from Towcester Rd and 50 leaving into Foscoote Rd and Church St whereas Croft gives a figure of 38 vehicles entering at the Foscoote Rd end and leaving at the Towcester Rd end but only 10 entering at the Towcester Rd end and 5 leaving at the Foscoote Rd end. This seems to be a very severe underestimate of the traffic level along Main St in the morning;
- For traffic along Main St in the evening the figures from this survey are 64 vehicles entering Main St at the Foscoote Rd end and 100 leaving at the Towcester Rd end. Croft figures are 50 entering at Foscoote Rd end and leaving at Towcester Rd end. In the other direction, this survey records 68 entering from Towcester Rd and 57 leaving at Foscoote Rd whereas Croft reports 54 entering from Towcester Rd and 50 leaving at the Foscoote Rd end; and
- Although the figures for traffic using Mill Lane to travel from Church St to access the A422 are broadly similar from this survey and from Croft, vehicle numbers coming from the A422 are very different, this survey recording 206 in the morning and 149 in the evening compared with Croft figures of 62 and 117 respectively.

The results of this survey show clearly that the figures supplied by Croft are not representative of the reality of current traffic flows in Maids Moreton, which are many times heavier than Croft states. As a consequence, the traffic management measures proposed to facilitate the development of site MMO006 seem to be based on unrepresentative data.

The existing road infrastructure of Maids Moreton can barely cope with current traffic levels and the additional traffic generated by adding 170 houses would create unacceptable traffic problems, damage severely the quality of life of current residents, and threaten the existence of the many historic buildings in the village, particularly along Main St, which has 12 Grade II listed buildings.

Most of these houses have no or very limited foundations and are very vulnerable to damage, even from existing traffic flows; to deliberately allow such a substantial increase in traffic flows would appear be in breach of both the National Planning Policy Framework and the wider tenets of Sustainable Development.

**There would thus seem to be a very strong case for an independent and comprehensive traffic survey of Maids Moreton before any decision is taken as to whether or not to allow planning application 16/00151/AOP to proceed further.** Furthermore, the report submitted by AVDC Heritage and Conservation should also be reviewed and revised to take into account current traffic flow data and its impact on the historic buildings along all of Main St and around St Edmund's Church.

# 1 Background

## 1.1 *The Historic Village of Maids Moreton*

1. The village of Maids Moreton is mentioned in the Domesday Book. A map of the village dated 1595 is held in the Codrington Library at All Souls College, Oxford. This map shows clearly a significant number of houses along Main St, which are still in existence. In 2017, supported with funding from the Aylesbury Vale Community Chest, Maids Moreton Conservation Group published an informative guide to historic properties in the village entitled *Maids Moreton Houses with History*.

2. This guide shows that along Main St there are 12 Grade II listed properties. In addition to this, there are within the Conservation Area two Grade II listed properties along the Duck Lake section of Moreton Rd and one just past the west end junction of Main St on Towcester Rd. Of the 12 Grade II listed buildings along Main St, two date from the sixteenth century and 10 from the seventeenth century. There also several buildings of note of similar age.

3. The presence of such a large number of important old properties, which long predate formal traffic planning considerations and regulations, means that for much of its length, Main St is narrow and it also lacks pavements on one and at times both sides. Any factors that would result in increased traffic flows are consequently of huge importance to both the quality of life of current residents and, since many of these properties lack proper foundations, to the continued, secure existence of these historic properties.

4. At the junction of Mill Lane (College Rd) and Church St, there is the fifteenth century, Grade I listed St Edmund's Church; the fabric and setting of this building is of critical importance to both the community of Maids Moreton and also to wider society. The presence and concentration of these listed buildings requires that great attention must be paid to their conservation when giving consideration to developments leading to increased traffic flows, especially when these result in increased traffic along Main St and around the Church St/Mill Lane junction. Figure 1 below shows the Maids Moreton Conservation Area and the listed buildings within it.

## 1.2 *Genesis of this Traffic Survey*

5. On 30 November, having had great difficulty reversing into the drive of her house on Main St because of the plethora of impatient drivers, Jane Wood, a long-standing resident of Maids Moreton, did a 15-minute count of vehicles passing her house. Between 0815 and 0830, she recorded 65 vehicles travelling towards Towcester Rd and 28 travelling towards Foscoote Rd, so 93 in 15 minutes. This figure was so different from the traffic flow rate along Main St in the diagrams submitted by Croft in their document entitled *Transport Assessment – Highways Technical Note* dated June 2018 that she undertook a regular traffic count for the following days and shared this information with Pat Hardcastle, a Maids Moreton Parish Councillor. The figures she collected are shown in Table 1 below.

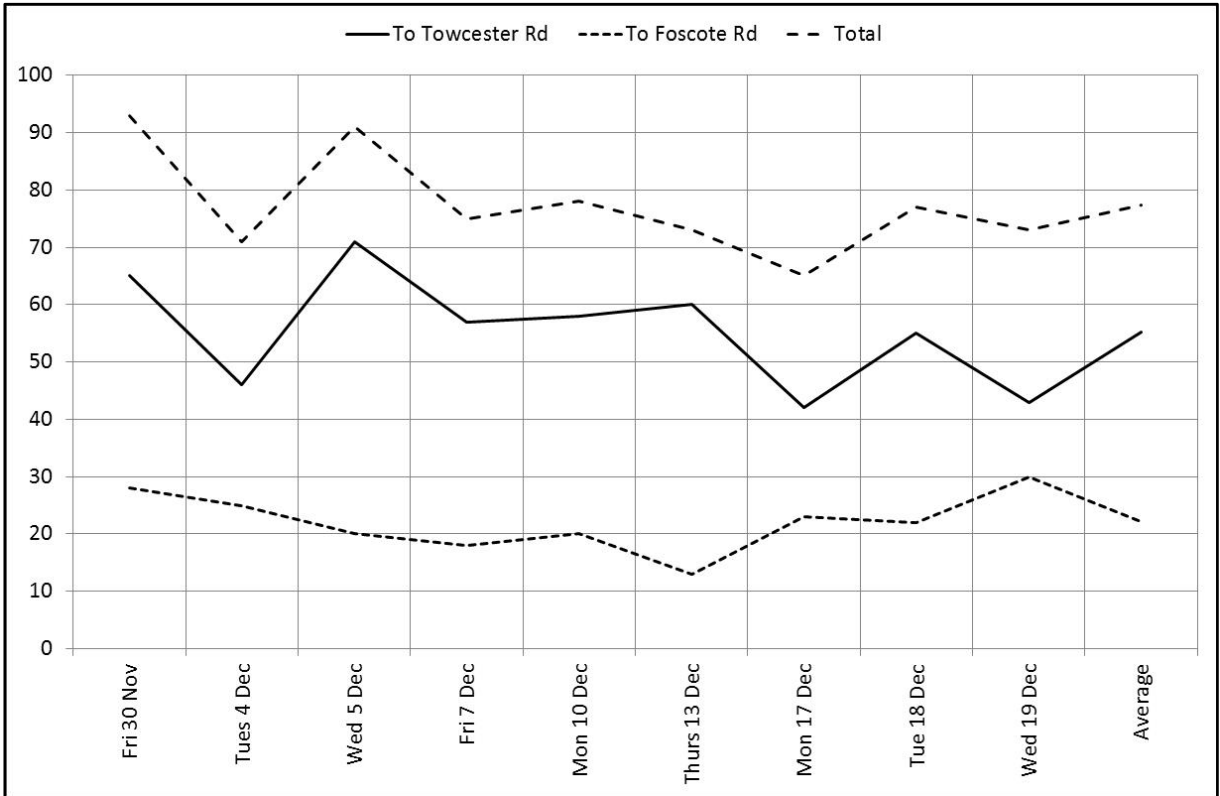
6. The Croft diagrams for traffic flow between 0800 and 0900 suggest 38 vehicles travelling up Main St from Foscoote Rd to Towcester Rd and 10 travelling in the other direction; this is very substantially lower than the number of vehicles Jane Wood counted in a 15 minute portion of that hour. The Croft diagrams of surveyed flows, which are based on traffic counts they conducted on Wednesday 2 May 2018, are attached in Annex 1.

7. Pat Hardcastle (PH) is a member of the Maids Moreton Parish Council's Neighbourhood Plan Working Group while he and Jane Wood (JW) are also members of Maids Moreton Conservation Group, where planning proposals and traffic issues are frequently brought up because of their potential impact on the fabric of the village. As part of the Neighbourhood Plan, an up-to-date traffic survey is being discussed but this has not yet taken place. The scale of the disparity between the traffic figures submitted by Croft and those recorded in the informal visual traffic count are such that PH and JW undertook further investigations to try and determine more accurately a range within which the correct figures might lie.

8. The “gut feeling” about traffic levels along Main St Maids Moreton among most residents is that those submitted by Croft are too low and this feeling is strengthened by trying to cross Main St, or to walk along it where there are no pavements, especially during the morning rush hour and in late afternoon and early evening. Given this disparity, PH and JW concluded that a more formally designed traffic survey was needed; this is covered in Section 2 below, *et seq.* The Traffic Survey points used in the survey on Thursday 6 December 2018 are also shown in Figure 1 below.

**Table 1 Vehicles using Main St - Informally Collected in a 15 minute period 0815 - 0830**

Date→ Direction↓	Fri 30 Nov	Tues 4 Dec	Wed 5 Dec	Fri 7 Dec	Mon 10 Dec	Thurs 13 Dec	Mon 17 Dec	Tue 18 Dec	Wed 19 Dec	Average
To Towcester Rd	65	46	71	57	58	60	42	55	43	55
To Foscoote Rd	28	25	20	18	20	13	23	22	30	22
Total	93	71	91	75	78	73	65	77	73	77

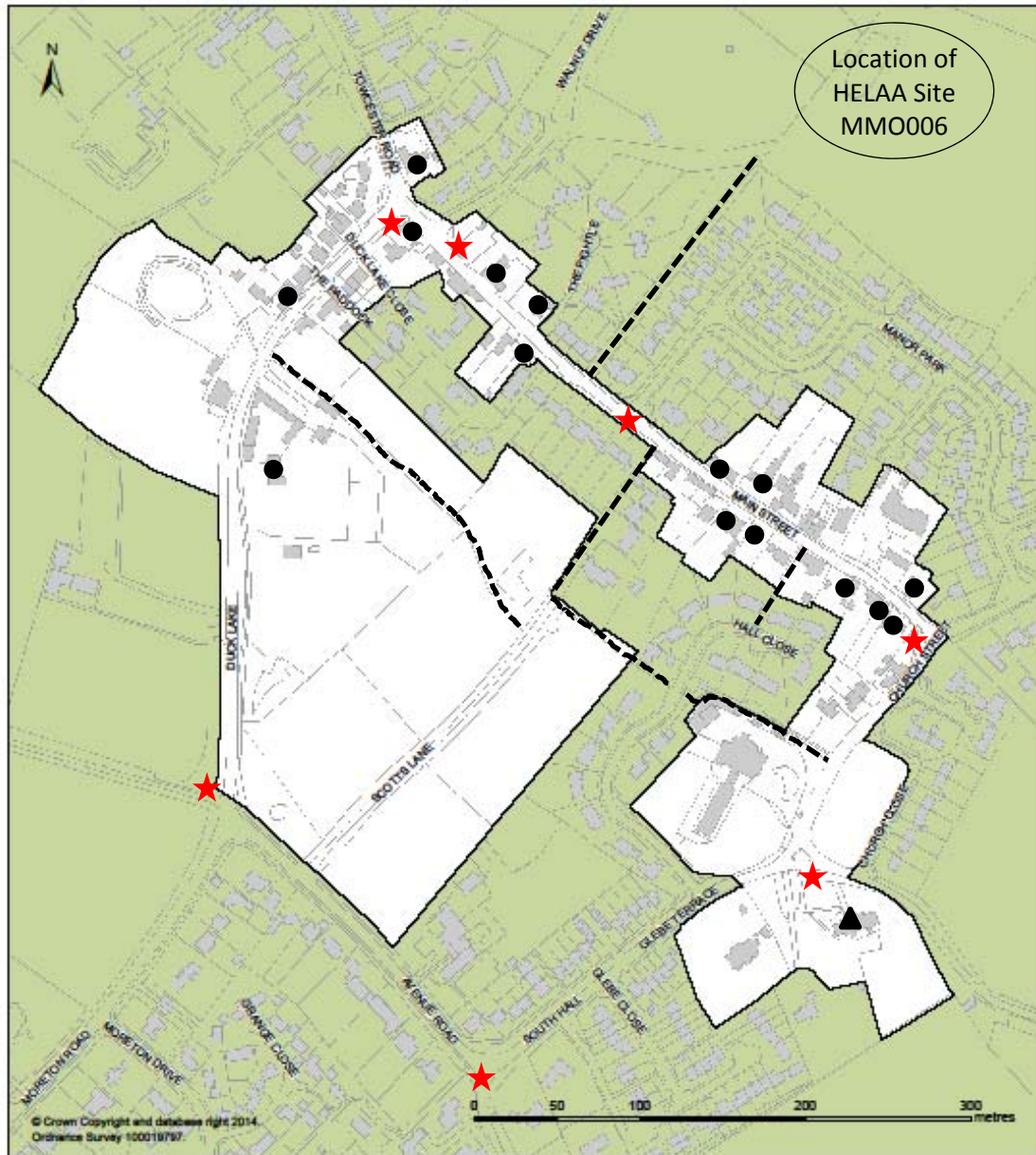


9. Akeley Wood School closed for the holiday on Wednesday 19 December 2018, the figures recorded for traffic passing along Main St counted on Thursday 20 December 2018 at the same place as those in Table 1 above were noticeably lower; vehicles travelling towards Towcester Rd were 25, those towards Foscoote Rd, 14. School traffic is very obviously a significant element of the overall flow and traffic surveys must be aware of, and take account of, this, although even without school traffic, the number of vehicles passing along Main St is still considerably higher than the Croft survey reported.

Figure 1 Maids Moreton Conservation Area and Listed Buildings

**Maids Moreton Conservation Area**

Map downloaded from AVDC Website



- ★ = Traffic Survey point
- ▲ = Grade I Listed Building
- = Grade II Listed Building
- = Public Footpath

## 2 Designing the Survey

10. Given the apparently large discrepancies between the informal observations and the traffic survey data Croft has used to plan their traffic management works, including both the mini-roundabout at the junction of Walnut Dr/Main St, which includes parking restrictions and inappropriate illuminated signage, and around the church and at the Mill Lane/A422 junction, it was decided to use a rigorously designed visual survey to collect more detailed information. The critical junctions around Maids Moreton are shown on the map in Annex 2. There are seven major ones, although that at Avenue Rd/South Hall is only critical in the morning period.

11. In order to provide a comprehensive survey, the results from which could be compared directly with the Croft figures, it was obviously necessary to use the same time periods as Croft: 0800 to 0900 and 1700 to 1800 and to record traffic flows at each of these seven junctions. Croft did not record at the junctions of Main St/Walnut Dr nor that of Main St/Manor Park. Recording at these junctions, as well as at the Towcester Rd and Foscoate ends of Main St, gives a more detailed picture of the traffic flows along Main St and also provides opportunity for internal quality assurance by checking the figures for traffic flow from one survey point to the next.

12. A survey form with six columns, one for each possible traffic flow direction at each junction was drawn up with each column divided into four sections for: (i) cars; (ii) vans and light goods vehicles; (iii) heavy vehicles such as trucks, tractors and buses; and (iv) bicycles. PH made a pilot survey at the Main St/Walnut Dr junction between 0800 and 0900 on Monday 3 December to check both the survey system and the recording form. The results, which are given in Annex 3, showed major differences compared with the Croft figures, with traffic flows orders of magnitude higher than those submitted by Croft. This gave sufficient reason to go ahead with the full survey.

13. A group of people able and willing to help do the survey was gathered together through the Maids Moreton Conservation Group and through friends and other contacts. The list of traffic recorders is given in Annex 4. The recording time periods meant that the recorders were either self-employed, working part-time or retired, as people working full-time could not be available. For the avoidance of doubt, all these recorders are currently active or recently retired professionals who are all more than adequately literate and numerate.

14. A set of recording instructions was prepared and PH or JW visited all the recorders to give these out together with recording forms for their specific junction and to answer any queries. The survey date was agreed as Thursday 6 December 2018, which, like the Croft survey date of 2 May 2018, was a normal weekday. JW acted as recorder for one point leaving PH to go around all the survey points twice during each hour to check that all the recorders were in place and to deal with any queries. At a few survey points there were different recorders morning and evening due to people's other commitments.

15. The survey instructions for recorders are given in Annex 5, which also includes the detailed observation records from each survey point for both recording periods. The original forms have been scanned and then filed and are available if required for scrutiny. At the survey point of Main St/Manor Park, JW also made video recordings in both directions for the complete hour of both traffic survey recording periods to provide visual evidence of the traffic numbers, speed and varying density of flow.

### 3 Results

16. The traffic counts made at each survey point in each recording period were transcribed into summary forms, which are in Annex 5. A diagram was created similar to that of the key roads within Maids Moreton presented by Croft. The Croft diagrams are incorrect in that they ignore Manor Park and show traffic proceeding to the development site; this route does not exist and the only route from Foscoote Rd to Walnut Dr, apart from along the full length of Main St, is through Manor Park. The diagrams for this survey include Manor Park but do not include other relatively minor side roads.

17. The diagrams in Annex 6 show the traffic count from this survey at each point for each of the six possible directions at each junction. Where Croft has presented their traffic flow number for a specific direction at a junction, this is shown adjacent to the recorded count but in brackets. It is strikingly evident that there are wide discrepancies.

18. Some of the widest discrepancies are:

- Traffic coming down the failed Foscoote Rd and going straight into Church St, where Croft recorded 116 in the morning against 27 in this survey and 64 against 15 for the evening;
- In respect of morning traffic coming into Main St, Croft shows 15 turning right from Foscoote Rd and 23 turning left from Church St while this survey recorded figures of 11 and 138 for these directions. For evening traffic, Croft shows 20 turning right from Foscoote Rd into Main St and 30 turning left from Church St into Main St whereas this survey recorded figures of 4 and 60 for these directions;
- At the critical junction of Mill Lane (labelled as College Rd by Croft) and Church St, in the morning, Croft shows 98 vehicles going down Mill Lane from Church St to access the A422 whereas this survey recorded 108; the figure for traffic coming up to Church St from the A422 according to Croft was 62 vehicles whereas this survey recorded 206. The evening figures for traffic going down Mill Lane to the A422 are Croft 56, this survey 70 and for traffic coming up from the A422, Croft 117 and this survey 149;
- At the junction of Main St and Towcester Rd in the morning period, Croft's figures are 10 vehicles turning left off the Towcester Rd into Main St and none turning right whereas this survey found 41 turning left into Main St and 39 turning right. For traffic coming up Main St to the junction with Towcester Rd, Croft shows 19 vehicles turning left and 19 turning right, whereas this survey recorded 38 turning left and 121 turning right;
- The evening figures are slightly less disparate but still strongly divergent; Croft shows 54 turning left from Towcester Rd into Main St and none turning right whereas this survey recorded 33 turning left and 35 turning right. For vehicles coming up Main St to the Towcester Rd junction, Croft shows 50 turning right and none left whereas this survey shows 51 turning right and 49 turning left; and
- At the Avenue Rd/Moreton Rd (A413) junction in the morning, Croft shows 20 vehicles heading towards Buckingham turning left into Avenue Rd, this survey recorded 13. Croft shows 57 turning right into Avenue Rd coming from Buckingham, compared with 102 recorded by this survey. Evening figures are also divergent, Croft showing 37 turning left into Avenue Rd compared with 2 recorded by this survey and 63 turning right compared with 47 recorded by this survey.

19. There appear to be major discrepancies between the traffic flow figures shown by Croft and those recorded by this survey, in particular in respect of two key flows: (a) along Main St, with which Walnut Drive has a junction where a mini roundabout is proposed; and (b) traffic going to and coming from A422 into Maids Moreton. Comparative figures for the Walnut Dr/Main St junction are shown diagrammatically in Annex 7. It is also strikingly apparent that traffic using Foscoote Rd recorded by this survey is far less than that shown by Croft.



## 4 Discussion, Conclusions, Validation and Next Steps

### 4.1 Discussion

20. The traffic flow figures through and within Maids Moreton submitted by Croft, which are based on their survey undertaken on 2 May 2018, and those collected by this survey on 6 December 2018 are severely and disturbingly different; neither date was either a school or public holiday. While some differences would be expected between these two survey dates, the discrepancies are so large that, even accepting minor observer errors and that some people might use a vehicle rather than walk or cycle in December, the discrepancies are far beyond the minor variations that could be attributed to these factors.

21. Table 2 and Figure 2 below show the comparative figures for six common survey points both recorded by Croft and used in this traffic survey. It is striking that the Croft figures show far more traffic coming into or leaving Maids Moreton *via* Foscoote Rd than does this survey. Given that Foscoote Rd is a failed road, the Croft figures need to be further explained. These figures grossly exceed those of this survey other than for traffic from Main St and Church St going into Foscoote Road in the early evening, which could be accounted for by the number of houses in Manor Park and Wellmore that would likely be accessed by this route.

22. At the Towcester Road/Main St junction, Croft figures are consistently much lower than those from this survey, meaning that the Croft estimates of traffic flow along Main St past the proposed mini-roundabout are severely understated. In respect of the traffic using Mill Lane, although the figures for traffic from Maids Moreton down to the A422 are broadly similar, those for traffic coming from the A422 are wildly different, with this survey showing considerably more vehicles coming from A422 to Maids Moreton than the Croft figures in both recording periods. This is what would be expected since turning right at the junction of Mill Lane with the A422 is so dangerous as to be impossible or close to suicidal at rush hours whereas coming from Buckingham, Mill Lane is an easy left turn.

23. Employment location summaries from various recent development applications have projected 75% of traffic using Mill Lane to the A422 would wish to turn right but most people wanting to do this sensibly prefer to go down Moreton Road and through Buckingham to the Page Hill roundabout, which route is less likely to engender a damaged vehicle and a visit to A&E or even a written off vehicle and a pay out on their motor and life insurance policies!

24. In light of the proposed mini-roundabout at the junction of Walnut Drive and Main St, the figures for traffic using the Main St/Towcester Rd junction are particularly crucial since these vehicles would pass this mini-roundabout going to or coming from Towcester Road into Main St. The combined figure for these vehicles according to the Croft survey is 48 vehicles in the morning compared with this survey's count of 269. In the evening the discrepancy is less but still substantial, Croft recording 104 compared with 170 from this survey.

25. Looking at the gross total of vehicles recorded by Croft and this survey at the 16 points where Croft also gives a figure, the Croft total is 727 between 0800 and 0900 compared with 1128 from this survey. Between 1700 and 1800, the magnitude is reversed, with Croft stating 802 compared with 615 from this survey. Traffic in the morning includes people doing the "school run" but as the schools finish between 3 and 4, the bulk of the return "school run" journeys is likely to have occurred before 1700, which may explain why this survey's afternoon figure is less than the morning one.

26. The 16 common survey points predominantly encompass vehicles leaving or coming back into Maids Moreton. It is strange, therefore, that the Croft figure for the overall traffic number counted between 1700 and 1800 is higher than their morning one, since one would expect people to be coming home to Maids Moreton. This is certainly evident from this survey but Croft figures are completely opposite to what would be expected.

**Table 2 Traffic flow figures for Croft and MMTS common points**

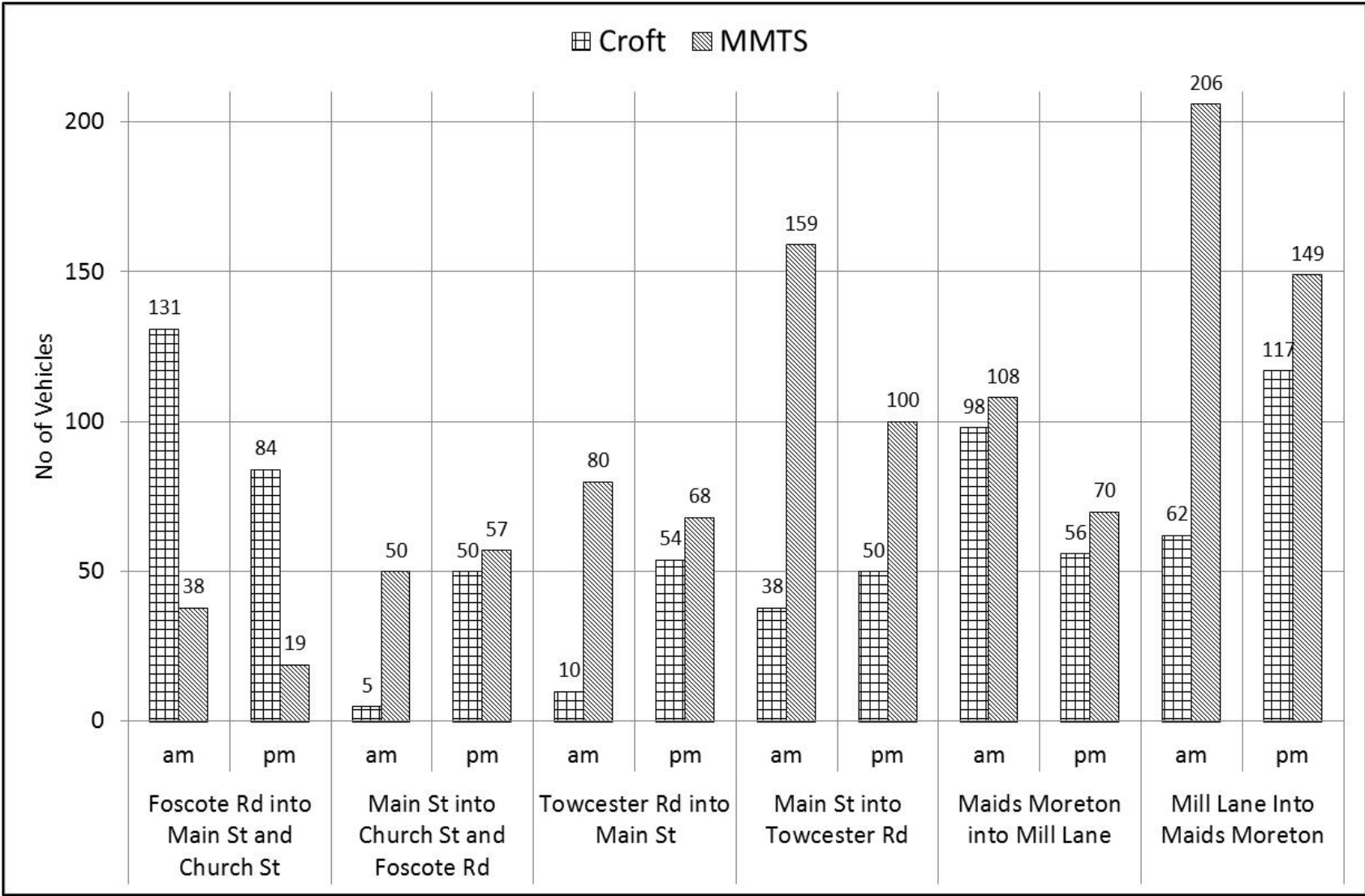
*Traffic Flows at Individual Junctions*

<i>Time period</i>	<b>Foscote Rd into Main St and Church St</b>		<b>Main St into Church St and Foscote Rd</b>		<b>Towcester Rd into Main St</b>		<b>Main St into Towcester Rd</b>		<b>Maids Moreton into Mill Lane</b>		<b>Mill Lane Into Maids Moreton</b>	
	<i>am</i>	<i>pm</i>	<i>am</i>	<i>pm</i>	<i>am</i>	<i>pm</i>	<i>am</i>	<i>pm</i>	<i>am</i>	<i>pm</i>	<i>am</i>	<i>pm</i>
Croft	131	84	5	50	10	54	38	50	98	56	62	117
MMTS	38	19	50	57	80	68	159	100	108	70	206	149

*Total Traffic Flows for all directions at junctions recorded by Croft and MMTS*

<i>Time period</i>	<b>No of Vehicles</b>	
	<i>am</i>	<i>pm</i>
Croft	727	802
MMTS	1128	615

**Figure 2 Comparison of Croft and MMTS figures at six common survey points**



## 4.2 Conclusions

27. Looking at the traffic flows recorded in this survey between the various survey points the figures are relatively coherent between survey points, differences may be due to a range of causes; *inter alia*:

- There are minor junctions with side roads along all the routes surveyed leading to varying numbers of houses between survey points which vehicles may have used;
- Vehicles may simply have parked at the side of the road between survey points; and
- Some vehicles may have turned around, using a side road, particularly towards the Towcester Rd end of Main St as people come to deliver or pick up others from the Village Hall, which is midway between Walnut Dr and Manor Park. The Wheatsheaf pub is also between these two survey points, which may have some effect on the evening period records.

28. Traffic flows along Main St are much heavier than Croft figures suggest and there is also a great deal of on-street parking as many properties do not have off-road parking. Even where houses do have driveways these are often quite difficult to access, particularly those for older houses. Traffic flow can quickly build up into blocks because parked vehicles mean much of Main St is effectively single lane. Larger vehicles already have problems negotiating it. In the past three weeks, it has twice been blocked by an emergency vehicle for two hours or more, fortunately during the night. This remains a vulnerability for traffic flow along Main St.

29. The distance between the Give Way lines at Towcester Rd and the proposed mini-roundabout is only 19 m, which would allow for a queue of only 3, or 4 very small, vehicles at most. The plans proposed by Croft appear to be based on their apparently large under-recording of traffic flows and seem especially unrealistic in light of the reality of the traffic flows recorded by this survey. Were the development of 170 houses to go ahead one might expect in excess of 150 additional vehicles exiting the site between 0800 and 0900. The condition of Foscoote Rd and the existent houses between the proposed site exit and Main St mean that this section of Foscoote Rd is unsuitable for improvement.

30. Assuming 100 additional vehicles were to come down Walnut Dr to Main St, traffic heading up Main St to Towcester Rd would have to give way. Croft figures suggest that only 38 vehicles would be coming along Main St between 0800 and 0900 but this survey recorded 159, a fourfold increase. Needing to give way at the proposed mini-roundabout would cause a rippling build-up of stationary traffic back down Main St to the Foscoote Rd junction and probably beyond. The traffic flow on Main St in the morning going to Towcester Rd is roughly twice that coming in the opposite direction. In the evening, the traffic going towards Towcester Rd is still half as much again as that coming the opposite way, meaning that the bulk of the traffic would have to give way at the mini-roundabout.

31. The January 2017 version of HELAA, which changed the previous assessment of site MMO006 from “Unsuitable” to “Suitable” without any explanation, noted the following conditions would have to be met if development were to go ahead:

*Suitable* – subject to achieving a satisfactory landscaping scheme sensitive to the wider countryside, protecting TPO trees and public rights of way and achieving a suitable highway access arrangement.

32. The results of this traffic survey, which clearly demonstrate that the plans for development are based on unrepresentative traffic data, suggest strongly that “a suitable highway access arrangement” has not and cannot be met. The existing road infrastructure of Maids Moreton and the existence of a large number historic and listed buildings mean that it cannot cope with the increased traffic that a development of this site at the scale proposed would generate without causing very substantial harm. To allow this to happen would be a clear breach of the specific requirements of the National Planning Policy Framework. It would also directly contradict the fundamental tenets of Sustainable Development.

33. At the public consultation event for the application for outline planning for site MMO006, ref. 16/00151/AOP, a poster was displayed summarising “Proposals for Vitalograph Business Park.” The text on this poster stated that it was the intention to increase their office staff by around 50 people. It further noted that then-current goods vehicle movements averaged 8 to 10 per hour. These proposals would increase further the traffic flows from the 170 houses, were this to go ahead.

34. It is not clear why permission was originally granted for this business park, given its very unsuitable location with poor access, when there is economic land available on the Buckingham Industrial Estate, where the necessary road infrastructure is already in place. As expansion of the current level of activity at the Vitalograph Business Park would exacerbate further the already critical traffic situation in and around Maids Moreton and, as there is more suitable land already available in Buckingham, further expansion of business activities on the site should not be approved.

35. The survey on which this report is based also noted bicycle traffic (see Annex 5 below) although bicycle figures are not included in the totals for number of vehicles. There was very little bicycle traffic recorded at any survey point, which given the heavy vehicular traffic flows is unsurprising; yet there are regular exhortations for people to cycle more linked to attempts to deal with excess traffic. Given the traffic flows recorded in this survey and the absence of dedicated cycle ways, it is not surprising that so few people choose to cycle.

36. The weight of traffic along Main St also causes problems for people on foot. A substantial proportion of its length lacks a pavement on one and sometimes both sides, which with the traffic flows makes walking unpleasant and dangerous, not least because many vehicles tend to drive at excessive speed despite the traffic conditions. Scott’s Lane, which is accessed from Main St by a public footpath opposite the Manor Park junction, has lowered kerbs and hazard warning slabs set into the pavement opposite the entrance to the footpath. It does not have any warning to drivers, such as red tarmac, and the traffic flow along Main St is so intense at critical times that few, if any, families allow their children to cross Main St unaccompanied at rush hours.

37. The hazard warning slabs are set diagonally across Main St and are poorly installed, particularly those on the northern side; people slip quite regularly in icy conditions. It should be possible to move those on the northern side to make a direct crossing but the lack of a warning to drivers remains a limitation on use of the crossing point, which is important for children heading to the primary schools.



38. Overall, given the already excessive traffic flows through Maids Moreton, it would be helpful if planning could focus on trying to reduce existing traffic bottlenecks rather than allowing these to increase through permitting completely inappropriate housing developments that may tick off a target but undermine the quality of life of existing communities and fly in the face of the tenets of sustainable development.

39. In respect of Outline Planning Application 16/00151/AOP for site MMO006 and the huge disparity between the results of this traffic survey and the figures submitted by Croft, there needs to be a thorough reconsideration of the current traffic management proposals.

40. Given the level of traffic along Main St, the numerous listed buildings along it and the immutable limitations to improvement arising from its origins and the time when the houses along it were constructed, the scope and depth of the report from AVDC Heritage and Conservation dated 8 August 2018 seem far too limited. Their report simply concentrates on the immediate environs of the proposed mini-roundabout at the Main St/Walnut Dr junction. It does not even mention the proposals around the Church St/Mill Lane junction, which would impact both severely and negatively on the setting and access for the Grade I listed St Edmund's church.

41. This AVDC Heritage and Conservation report does not appear to have given any consideration to the actual traffic flows along Main St where there are 12 Grade II listed buildings and the impact on these properties, which is likely to be severe in respect of their fabric as well as the quality of life of their residents. The final part of the Discussion section of this AVDC report states:

*Paragraph 134 of the NPPF states 'Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.'*

*Taking into account the requirements of Section 66 and 72 of the P(LB&CA)A 1990 and the NPPF, I consider that these highway works will have a minor negative effect on the significance of the heritage assets although this is at a lowest level of harm and would be less than substantial harm in terms of the National Planning Policy Framework.*

*As such I am not raising an objection to this development proposal.*

42. It is at best unclear whether the author of this report would have come to the same conclusion, *i.e.* ...less than substantial harm ... had she included the whole of Main St and the area around the church in her consideration of the impact of the proposed highway works and also included the increased traffic flows resulting from the development of 170 houses. Furthermore, paragraph 134 of the NPPF states clearly that where there is less than substantial harm... this should be weighed against the public benefits.... There are no details available of how (of if) the author actually weighed the public benefits.

43. It is hard to identify any benefits accruing to current residents of Maids Moreton from this development. While there would be benefits from access to housing for new residents of the development of site MMO006, these can only be valued incrementally compared with houses at other sites. Given the lack of services within Maids Moreton and the poor site access, the value of these benefits would be very small and may, indeed, even be negative. Public benefit considerations must also include residents of Buckingham. The impact of 170 houses and some 500 people added to the existing population of Maids Moreton would result in there being a negative public benefit for this population due to increased pressure on services and the increased traffic.

44. Ideally, the public benefit should be assessed through a comprehensive social and environmental cost benefit analysis, which includes all three pillars of Sustainable Development, which itself is stated to be at the heart of AVDC plans. At the minimum, assessing public benefit requires a detailed stakeholder analysis. As far as is known, neither of these two tools has been used. Yet the impact of 170 new houses bolted on beyond the clear northern boundary of the village of Maids Moreton would be very substantial. It is essential that the full impact of such a development is adequately and professionally determined.

45. The Leader of Buckinghamshire County Council wrote to Town and Parish Council clerks on 5 December 2018 concerning the new Unitary Council that should be established from 1 April 2020. In his letter, Martin Tett notes that the Secretary of State's announcement of changes echoes the importance of local engagement:

*I will also expect the new unitary council, and in the meantime the existing councils, to engage with their local communities about the appropriate arrangements for civic representation for towns and parishes. I similarly expect the councils to promote and help support the development of neighbourhood plans, as I consider these can be key building blocks for the successful implementation of change in Buckinghamshire that residents deserve.*

46. Given this clear statement of aspiration, it should be expected that adequate attention be given to the results of this traffic survey, which are highly cogent to the current proposal to develop 170 houses on site MMO006. Integral to such adequate attention should also be a considerably more comprehensive and professional review of the proposal by AVDC Heritage and Conservation. At the same time, together with the additional steps outlined in Section 4.4 below, the results of this traffic survey should provide a solid basis of traffic flow data to inform the ongoing development of the Maids Moreton Neighbourhood Plan.

#### *4.3 Validation and Data Quality Assurance*

47. Data collected by sampling can only give a reflection of the situation at a specific point in time; there are numerous potential sources of error in any sample. These may be due to the sample not being representative of the attribute being sampled, observer error, or external factors. For traffic surveys, for example, there could be a diversion or an accident that changes the normal flow pattern.

48. Given the primary purpose of this survey was to check the validity of the Croft figures, it was conducted on a day of the week when that was neither a public nor a school holiday, as was the Croft survey, and used the same time periods, 0800 to 0900 and 1700 to 1800. Recorders understood clearly the purpose of the survey and were readily able to record the passing traffic. Because visually recording traffic passing in up to six directions and often coming groups is challenging, it can be expected that there may be slight observer errors. The recording form also separated light and heavy commercial vehicles and this separation can at times be problematic.

49. It is considered that the methodology, which uses total number of vehicles, overcomes the last issue and by having seven survey points it is possible to check the numbers that would be expected to arrive from the records of the previous survey point tally. The figures do not tally exactly because of people pulling off to park and/or moving off after being parked between two survey points, using side roads between two survey points and so on. Nevertheless the figures are sufficiently similar to give full confidence in the overall accuracy of this traffic survey.

50. In this traffic survey, there was no possibility of collusion between the observers and the original survey sheets have been retained for inspection by anyone who doubts their veracity. There is also a video record of traffic in all directions taken at one survey point along Main St throughout both recording periods.

#### *4.4 Next Steps*

51. The traffic flow linked to afternoon school times will need to be assessed, particularly along Main St and Avenue Rd, as a supplementary survey to give comparative figures with this survey. The critical period seems to be 1530 to 1630 or 1700 and traffic flow could be recorded in 30 minutes blocks to give additional clarity.

52. A pilot count in 30 minute blocks of vehicles passing The Wheatsheaf on Main St was conducted between 1500 and 1700 on Friday 14 December 2018. The full results are presented in Annex 8. This pilot count found that 100 vehicles passed going towards Towcester Rd between 1500 and 1600 and 103 passed between 1600 and 1700. Figures for total vehicles passing heading towards Foscoote Rd were 69 between 1500 and 1600 and 118 between 1600 and 1700.

53. Combined with the figures collected on 6 December, this suggests that that heavy traffic flows can also be expected at the proposed mini-roundabout from 1500 through to 1700 and possibly for

additional periods in the morning. It is again emphasised that the traffic flow figures from Croft do not appear to represent accurately the actual traffic flows in Maids Moreton.

54. Further work is also required to check the traffic flow when there are popular activities at the Village Hall concurrently with deliveries taking place to the pub and to the forge and the influence of parking, especially along Main St.

55. This traffic survey did not include traffic flows at the junction of Mill Lane with the A422. Although the situation is well known by residents of Maids Moreton, it is important to verify the current traffic levels on the A422 and the problems of slow or even stationary traffic caused by people wishing to turn across the traffic to access or leave Mill Lane. The disparity between the figures for vehicles using Mill Lane collected by this survey and those of Croft suggests that the Croft figures are not adequately representative of current traffic flows.

#### *4.5 Final Points*

56. There has been a comprehensive set of submissions from Croft relating to traffic flows and proposals for traffic management for development of site MMO006. In addition to large numbers of objections from individuals these have in the main elicited detailed responses from Buckinghamshire County Council (BCC) Highways. By and large, the content of these latter communications relates to current and projected traffic flows and whether or not proposed highway engineering solutions are compliant with current regulations.

57. In so far as it goes this is all well and good; it is obviously an important aspect. Nevertheless, whilst it is accepted that Croft will have endeavoured to follow relevant design manuals and regulations, and that BCC will have endeavoured to ensure that proposals comply with relevant legislation and technical regulations, highway engineering solutions should not be just mechanical actions focused on very site specific issues that are developed in isolation from the context of the wider place within which they are proposed.

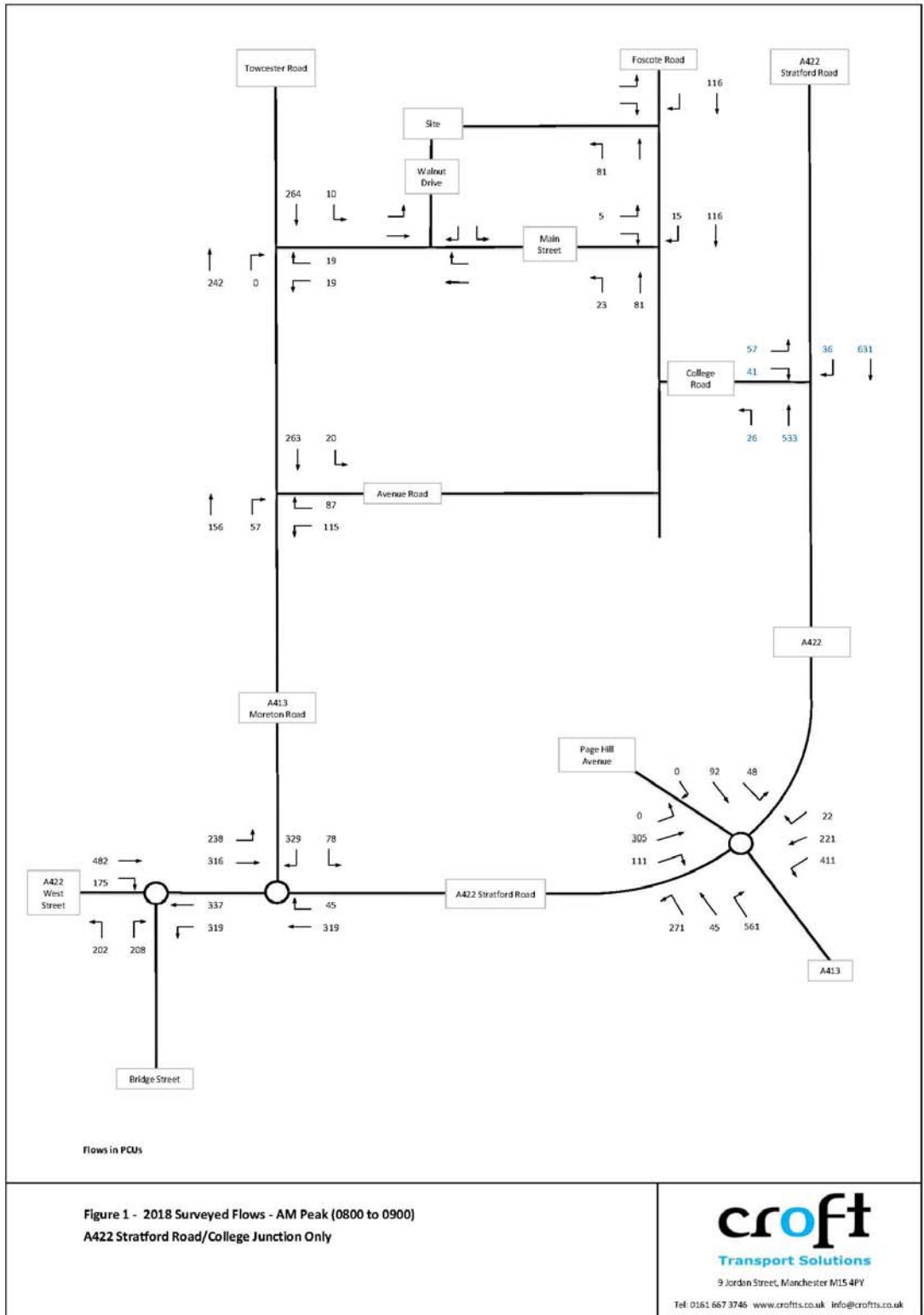
58. There does not appear to have been adequate attention given to the wider setting within which the various highway proposals related to development of site MMO006 will lie, nor to the impact that would accrue on the quality of life of the current community and the valuable heritage assets that would be affected. The very substantial differences between the traffic flow figures that Croft has used and the figures collected in this traffic survey suggest that the whole data base on which their traffic management proposals are based is fundamentally flawed.

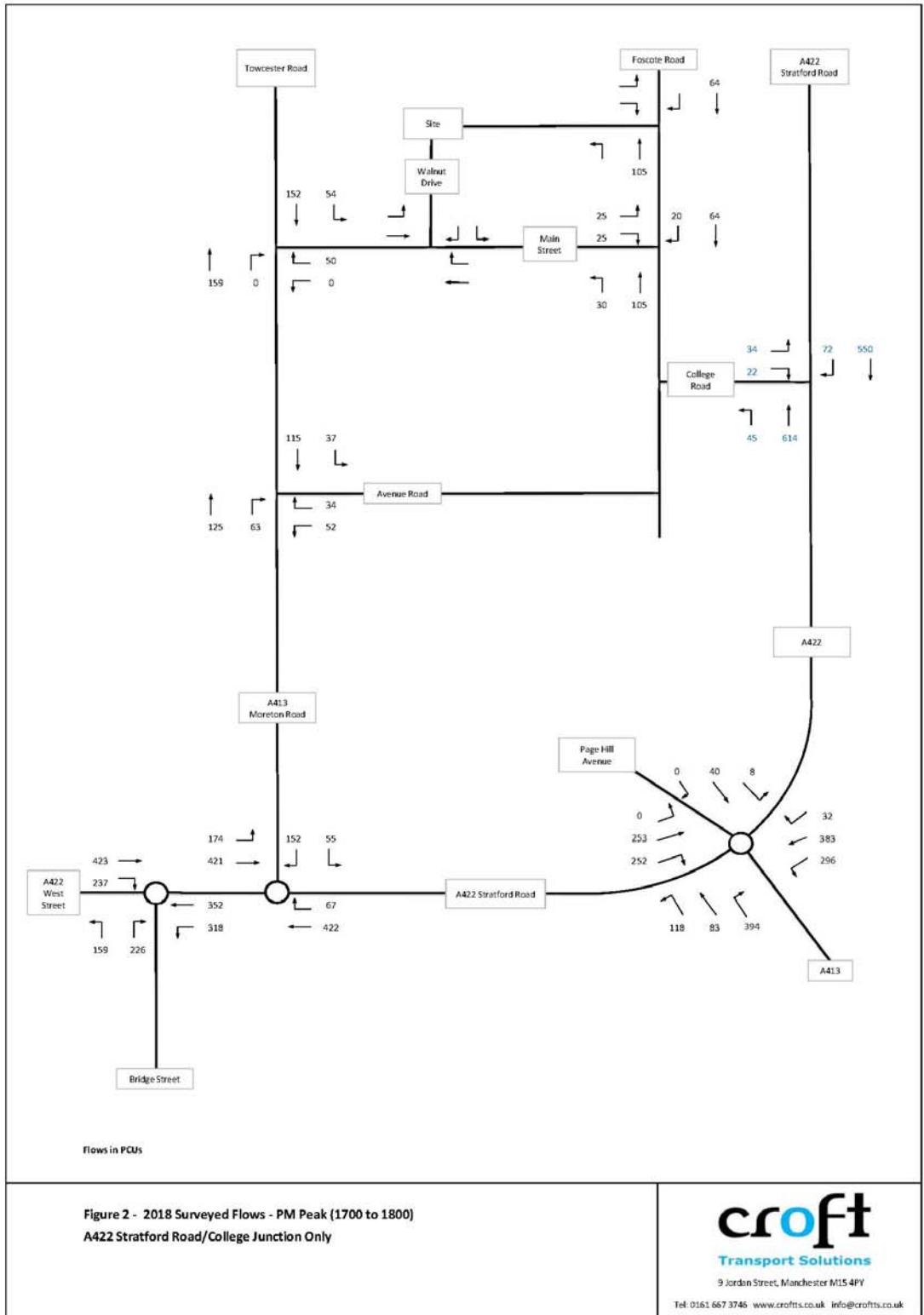
59. More is required than just obtaining accurate traffic flow figures. As a development such as that proposed for site MMO006 in application 16/00151/AOP would have massive and irreversible negative impact on Maids Moreton, development proposals must do more than simply be compliant with traffic engineering norms. The extensive important historic attributes of the village cannot be brushed aside and solutions that may fit within a 1950s housing estate cannot just be pasted into an historic village where the road infrastructure was set centuries ago and is flanked by buildings of high heritage importance.

60. All those concerned with decision-making in such an area must do more than simply address the individual elements and the bald regulations; they must take into account adequately the overall picture of the setting and its current use. Although the operational level is important, the strategic one is even more important, especially for those developments that will result in large scale and irrevocable change.

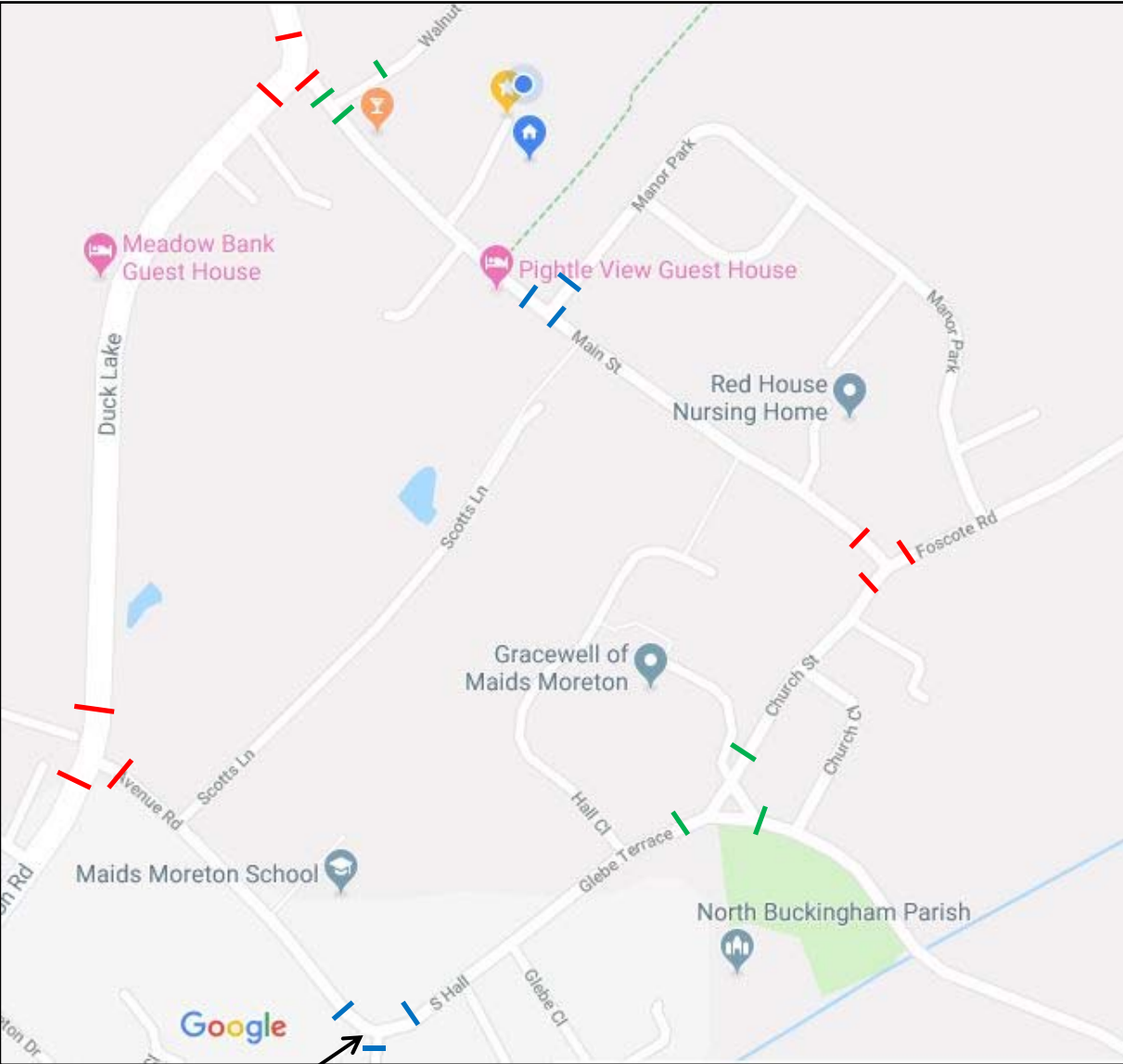


**Annex 1. Croft Transport Assessment Surveyed Traffic Flows 2 May 2018**





**Annex 2. Critical Junctions in Maids Moreton**



This junction is quite busy in the morning, as people use the playing field car park to drop children off at primary schools. Traffic was not surveyed in the evening slot, 1700 to 1800, as little use is made of it at this time. Recording was done at all other survey points from 0800 to 0900 and from 1700 to 1800, the time slots used by Croft.

**Annex 3. Pilot Traffic Survey Main St – Walnut Drive, 3 December 2018 0800 to 0900**

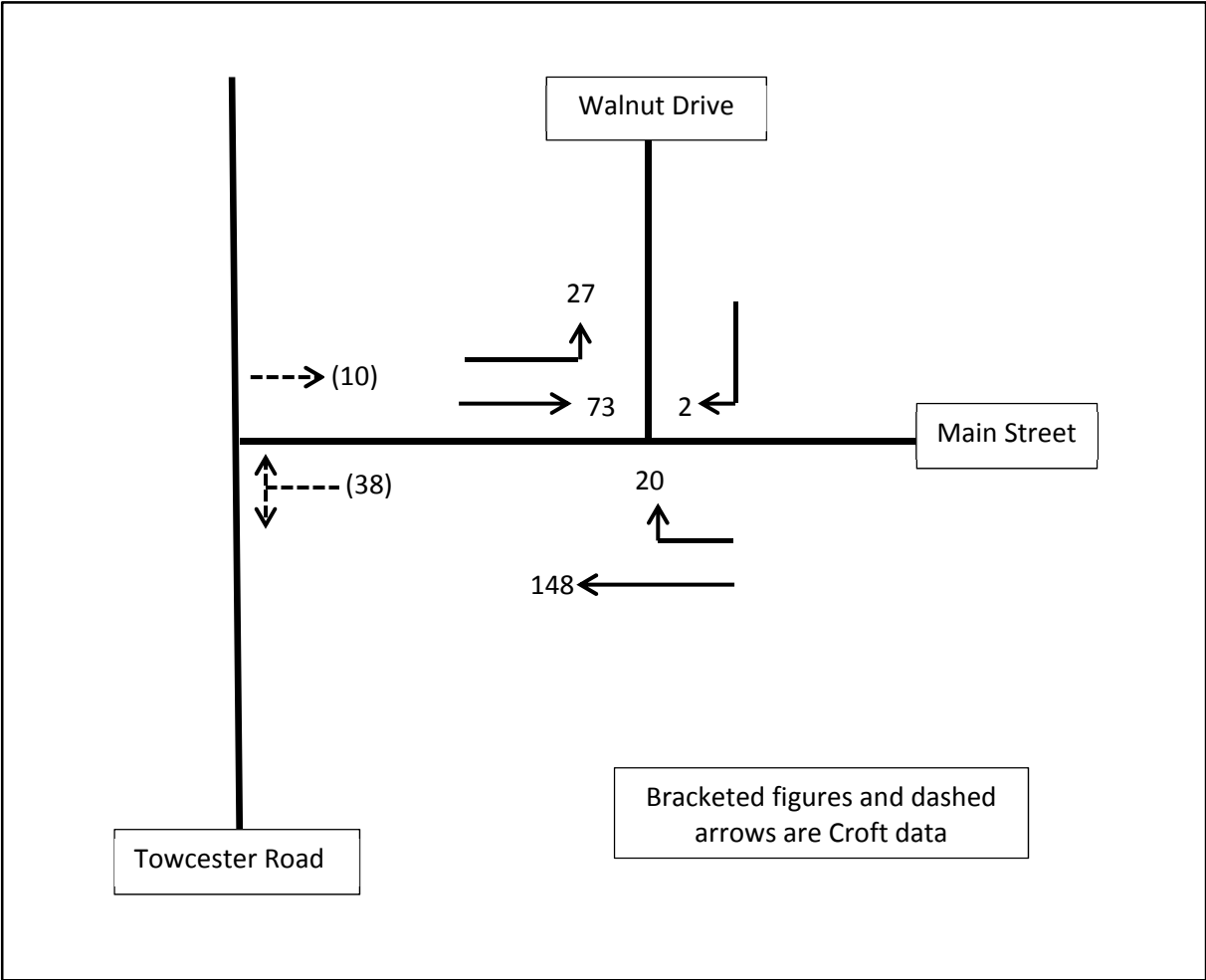
**Main Street Vehicle Survey**

Date	Mon 3 December 2018	Time	0800	to	0900
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Direction → Type and time ↓	Towcester Rd to Main St	Towcester Rd to Walnut Dr	Main St to Towcester Rd	Main St to Walnut Dr	Walnut Dr to Towcester Rd	Walnut Dr to Main St
<i>Cars</i>						
0800 to 0830	32	14	79	12		
0830 to 0900	32	12	58	5	1	
0800 to 0900	64	26	137	17	1	
<i>Vans and light vehicles</i>						
0800 to 0830	2	1	2	2	1	
0830 to 0900	5		7	1		
0800 to 0900	7	1	9	3	1	
<i>Trucks, buses, large vehicles</i>						
0800 to 0830						
0830 to 0900	2		2			
0800 to 0900	2		2			
All – 0800 to 0900	73	27	148	20	2	
<i>Bicycles</i>						
0800 to 0830		1		3		
0830 to 0900						
0800 to 0900		1		3		

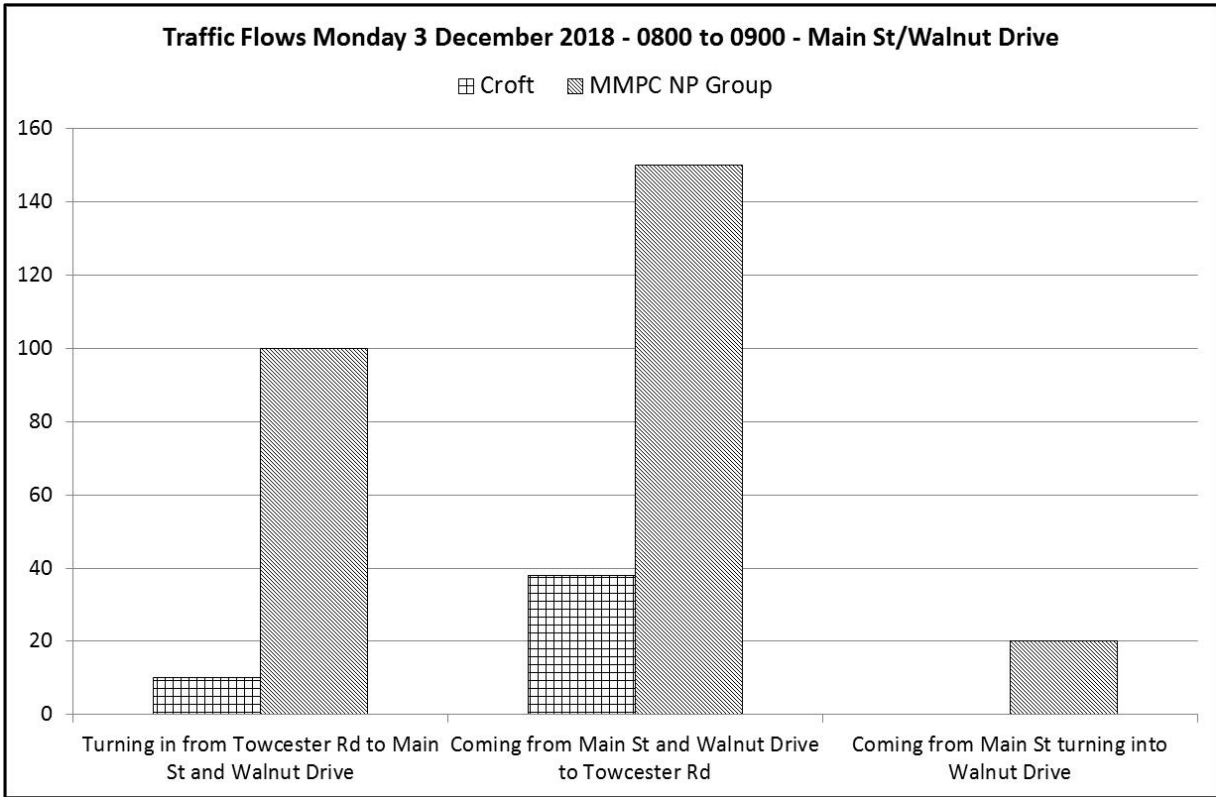
**Figure 3 Vehicle Flow Diagram – Main St/Walnut Drive Junction**

*Monday 3 December 2018 – 0800 to 0900*



**Figure 4 Comparison of 3 Dec Traffic Survey with Croft Traffic Survey**

Vehicle movement	Croft Wed 2 May 2018 0800 – 0900	MMPC NP Group Mon 3 Dec 2018 0800 – 0900
Turning in from Towcester Rd to Main St and Walnut Drive	10	100
Coming from Main St and Walnut Drive to Towcester Rd	38	150
Coming from Main St turning into Walnut Drive	Not recorded	20





**Annex 4. List of Traffic Recorders**

<b>Survey Point</b>	<b>0800 to 0900</b>	<b>1700 to 1800</b>
Towcester Rd - Main St	Graham Maw	Keith Dawson
Main St – Walnut Dr	Kevin Robinson	Kevin Robinson
Main St – Manor Park	Jane Wood	Jane Wood
Foscote Rd – Main St	Andrew Hyde	Andrew Hyde
Church St – Mill Lane	Pauline Kneafsey	Brian King
Avenue Rd – Playing Fields	Jill King	Not recorded, no significant traffic movements at this time
Avenue Rd – Moreton Rd	Chris Kneafsey	Fiona Hancock

Pat Hardcastle acted as “The Thin Controller” and visited each recorder twice in each period. A hand drawn traffic flow diagram and a short note of thanks were delivered to each recorder in the morning of 7 December.

## Annex 5. Survey Instructions and Summary of Results

Traffic flows around Maids Moreton are a critical issue for the Neighbourhood Plan and also to underpin the arguments against the Vitalograph development. On Monday 3 December, a pilot traffic survey was conducted at the junction of Main St and Walnut Drive between 0800 and 0900. The results suggest that the Croft figures for traffic flow are orders of magnitude too low and confirm Jane Wood's informal count on Thursday 30 November 2018 of 93 vehicles passing her house between 0815 and 0830.

The June 2018 Croft Transport Assessment report presents only partial figures for the flows around the various junctions relevant for Maids Moreton and their diagram of the actual streets in Maids Moreton is not correct – it omits Manor Park for example. The Croft figures were recorded on Wednesday 2 May 2018, which was neither a school holiday nor a public holiday.

Having tested the methodology, it would now be valuable to have a more comprehensive traffic flow record. The aim is to have seven survey points to cover the key entry and exit points of the village. These are:

- Towcester Rd – Main St
- Main St - Walnut Dr
- Main St – Manor Park
- Foscoote Rd – Main St
- Mill Lane – Church St
- Avenue Rd – Playing Fields, as many parents use the car park to aid drop off of children
- Avenue Rd – Moreton Rd

Each of these junctions has six possible directions for traffic flow. I have prepared a recording form with six headed columns for each survey point. The form is separated into the following four categories:

- Cars
- Vans and light vehicles
- Trucks, buses and other large vehicles
- Bicycles

When testing the form on Monday, the “gate” recording method (  $\#\# = 5$  ) was used. Each cell on the recording form easily takes up to three “gates”, equivalent to 15 vehicles. Monday's pilot survey was conducted from 0800 to 0900 and a new line was started in each category and direction at 0830 to provide separate figures for 30 minute periods. Croft present traffic flow figures for 0800 to 0900 and 1700 to 1800; it is essential that this survey uses the same time periods so it can provide as direct a comparison as possible.

Thursday 6 December is forecast to be reasonable weather; it is not easy recording in the rain and at some survey points it may be difficult to park safely where one can see and record all the vehicles. It would be great to do a survey at each of the seven points from 0800 to 0900 and then again from 1700 to 1800 to generate figures that can be analysed and compared with those Croft has presented and used as the basis to develop their traffic management plans.

## Main Street Vehicle Survey

Date	Thu 6 December 2018	Time	0800	to	0900
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Survey Point – Towcester Rd/Main St Junction

Direction → Type and time ↓	Heading North (Akeley)	Turn Right into Main St	Heading South (Buckingham)	Turn Left into Main St	Main St to Akeley	Main St to Buckingham
<i>Cars</i>						
0800 to 0830	75	23	87	25	70	18
0830 to 0900	71	16	92	13	46	18
0800 to 0900	146	39	179	38	116	36
<i>Vans and light vehicles</i>						
0800 to 0830			4	1		1
0830 to 0900	1		9	1	2	
0800 to 0900	1		13	2	2	1
<i>Trucks, buses, large vehicles</i>						
0800 to 0830	7		4	1	1	1
0830 to 0900	3		6		2	
0800 to 0900	10		10	1	3	1
<b>All vehicles 0800 to 0900</b>	<b>157</b>	<b>39</b>	<b>202</b>	<b>41</b>	<b>121</b>	<b>38</b>
<i>Bicycles</i>						
0800 to 0830	1					
0830 to 0900						
0800 to 0900	1					

## Main Street Vehicle Survey

Date	Thu 6 December 2018	Time	0800	to	0900
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Survey Point – Main St/Walnut Drive Junction

Direction → Type and time↓	Towcester Rd to Main St	Towcester Rd to Walnut Dr	Main St to Towcester Rd	Main St to Walnut Dr	Walnut Dr to Towcester Rd	Walnut Dr to Main St
<i>Cars</i>						
0800 to 0830						
0830 to 0900						
0800 to 0900	53	25	141	29	5	
<i>Vans and light vehicles</i>						
0800 to 0830						
0830 to 0900						
0800 to 0900	4	2	6	1		
<i>Trucks, buses, large vehicles</i>						
0800 to 0830						
0830 to 0900						
0800 to 0900						
<b>All vehicles 0800 to 0900</b>	<b>57</b>	<b>27</b>	<b>147</b>	<b>30</b>	<b>5</b>	
<i>Bicycles</i>						
0800 to 0830						
0830 to 0900						
0800 to 0900	0	0	0	0	0	0

## Main Street Vehicle Survey

Date	Thu 6 December 2018	Time	0800	to	0900
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Survey Point – Main St/Manor Park Junction

Direction → Type and time ↓	Main St towards Towcester Rd	Main St towards Foscote Rd	Towcester Rd to Manor Park	Foscote Rd to Manor Park	Manor Park to Towcester Rd	Manor Park to Foscote Rd
<i>Cars</i>						
0800 to 0830	120					
0830 to 0900	28					
0800 to 0900	148	38	10	3	18	1
<i>Vans and light vehicles</i>						
0800 to 0830	1	1	1			
0830 to 0900						
0800 to 0900	1	1	1		1	1
<i>Trucks, buses, large vehicles</i>						
0800 to 0830	3					
0830 to 0900						
0800 to 0900	3					
<b>All vehicles 0800 to 0900</b>	<b>152</b>	<b>39</b>	<b>11</b>	<b>3</b>	<b>19</b>	<b>1</b>
<i>Bicycles</i>						
0800 to 0830						
0830 to 0900						
0800 to 0900	2				3	

## Main Street Vehicle Survey

Date	Thu 6 December 2018	Time	0800	to	0900
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Survey Point – Main St/Foscote Rd Junction

Direction → Type and time ↓	Foscote Rd to Church St	Foscote Rd into Main St	Church St to Foscote Rd	Church St into Main St	Main St to Foscote Rd	Main St to Church St
<i>Cars</i>						
0800 to 0830	14	3	7	73	1	24
0830 to 0900	8	5	11	55		21
0800 to 0900	22	8	18	128	1	45
<i>Vans and light vehicles</i>						
0800 to 0830	4		4	4		2
0830 to 0900	1	2	3	5		1
0800 to 0900	5	2	7	9		3
<i>Trucks, buses, large vehicles</i>						
0800 to 0830		1		1		1
0830 to 0900						
0800 to 0900		1		1		1
<b>All vehicles 0800 to 0900</b>	<b>27</b>	<b>11</b>	<b>25</b>	<b>138</b>		<b>49</b>
<i>Bicycles</i>						
0800 to 0830	1					
0830 to 0900						
0800 to 0900						

## Main Street Vehicle Survey

Date	Thu 6 December 2018	Time	0800	to	0900
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Survey Point – Church St/Mill Lane Junction

Direction → Type and time ↓	Avenue Rd into Church St	Avenue Rd right to Mill Lane	Church St into Avenue Rd	Church St left into Mill Lane	Mill Lane left into Avenue Rd	Mill Lane right into Church St
<i>Cars</i>						
0800 to 0830	14	27	14	35	20	79
0830 to 0900	13	19	10	20	26	58
0800 to 0900	27	46	24	55	46	137
<i>Vans and light vehicles</i>						
0800 to 0830	1	3	1	1		15
0830 to 0900	1	2	3	1	3	1
0800 to 0900	2	5	4	2	3	16
<i>Trucks, buses, large vehicles</i>						
0800 to 0830	1		1		3	1
0830 to 0900	1					
0800 to 0900	2		1		3	1
<b>All vehicles 0800 to 0900</b>	<b>31</b>	<b>51</b>	<b>29</b>	<b>57</b>	<b>52</b>	<b>154</b>
<i>Bicycles</i>						
0800 to 0830						
0830 to 0900						
0800 to 0900	1		1			

## Main Street Vehicle Survey

Date	Thu 6 December 2018	Time	0800	to	0900
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Survey Point – Avenue Rd/South Hall Junction

Direction → Type and time ↓	Avenue Rd to South Hall	Avenue Rd to Playing Field	South Hall to Avenue Rd	South Hall to Playing Field	Playing Field to Avenue Rd	Playing Field to South Hall
<i>Cars</i>						
0800 to 0830	52	4	30	1		1
0830 to 0900	30	8	39	6	8	1
0800 to 0900	82	12	69	7	8	2
<i>Vans and light vehicles</i>						
0800 to 0830	3		5			
0830 to 0900	3		3			
0800 to 0900	6		8			
<i>Trucks, buses, large vehicles</i>						
0800 to 0830	2					
0830 to 0900						
0800 to 0900	2					
<b>All vehicles 0800 to 0900</b>	<b>90</b>	<b>12</b>	<b>77</b>	<b>7</b>	<b>8</b>	<b>2</b>
<i>Bicycles</i>						
0800 to 0830						
0830 to 0900						
0800 to 0900		2		1	2	1



## Main Street Vehicle Survey

Date	Thu 6 December 2018	Time	0800	to	0900
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Survey Point – Moreton Rd/Avenue Rd Junction

Direction → Type and time ↓	Heading North (Akeley)	Turn Right into Avenue Rd	Heading South (Buckingham)	Turn Left into Avenue Rd	Avenue Rd right to Akeley	Avenue Rd left to Buckingham
<i>Cars</i>						
0800 to 0830	83	54	79	5	2	54
0830 to 0900	85	48	106	8	13	35
0800 to 0900	168	102	185	13	15	89
<i>Vans and light vehicles<sup>1</sup></i>						
0800 to 0830						
0830 to 0900						
0800 to 0900						
<i>Trucks, buses, large vehicles</i>						
0800 to 0830						
0830 to 0900						
0800 to 0900	12		13			
<b>All vehicles 0800 to 0900</b>	<b>180</b>	<b>102</b>	<b>198</b>	<b>13</b>	<b>15</b>	<b>89</b>
<i>Bicycles</i>						
0800 to 0830						
0830 to 0900						
0800 to 0900						

<sup>1</sup> Included with cars

### Main Street Vehicle Survey

Date	Thu 6 December 2018	Time	1700	to	1800
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Survey Point – Towcester Rd/Main St Junction

Direction → Type and time↓	Heading North (Akeley)	Turn Right into Main St	Heading South (Buckingham)	Turn Left into Main St	Main St to Akeley	Main St to Buckingham
<i>Cars</i>						
1700 to 1730	77	20	68	19	32	28
1730 to 1800	56	13	58	14	18	20
1700 to 1800	133	33	126	33	50	48
<i>Vans and light vehicles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800	2	1	4		1	1
<i>Trucks, buses, large vehicles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800	1	1	1			
<b>All vehicles 1700 to 1800</b>	<b>136</b>	<b>35</b>	<b>131</b>	<b>33</b>	<b>51</b>	<b>49</b>
<i>Bicycles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800		1				1

**Main Street Vehicle Survey**

Date	Thu 6 December 2018	Time	1700	to	1800
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Survey Point – Main St/Walnut Drive Junction

Direction → Type and time ↓	Towcester Rd to Main St	Towcester Rd to Walnut Dr	Main St to Towcester Rd	Main St to Walnut Dr	Walnut Dr to Towcester Rd	Walnut Dr to Main St
<i>Cars</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800	60	1	63	2	28	12
<i>Vans and light vehicles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800	8		9			
<i>Trucks, buses, large vehicles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800	1					
<b>All vehicles 1700 to 1800</b>	<b>69</b>	<b>1</b>	<b>72</b>	<b>2</b>	<b>28</b>	<b>12</b>
<i>Bicycles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800	0	0	0	0	0	0

### Main Street Vehicle Survey

Date	Thu 6 December 2018	Time	1700	to	1800
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Survey Point – Main St/Manor Park Junction

Direction → Type and time ↓	Main St towards Towcester Rd	Main St towards Foscote Rd	Towcester Rd to Manor Park	Foscote Rd to Manor Park	Manor Park to Towcester Rd	Manor Park to Foscote Rd
<i>Cars</i>						
1700 to 1730	40	30	15	1	13	
1730 to 1800	15	15	5		3	
1700 to 1800	55	45	20	1	16	
<i>Vans and light vehicles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800	9	1	1			
<i>Trucks, buses, large vehicles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800	1					
<b>All vehicles 1700 to 1800</b>	<b>65</b>	<b>46</b>	<b>21</b>	<b>1</b>	<b>16</b>	
<i>Bicycles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800		5				

### Main Street Vehicle Survey

Date	Thu 6 December 2018	Time	1700	to	1800
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Survey Point – Main St/Foscote Rd Junction

Direction → Type and time ↓	Foscote Rd to Church St	Foscote Rd into Main St	Church St to Foscote Rd	Church St into Main St	Main St to Foscote Rd	Main St to Church St
<i>Cars</i>						
1700 to 1730	9	1	7	36	2	34
1730 to 1800	6	1	10	20	5	12
1700 to 1800	15	2	17	56	7	46
<i>Vans and light vehicles</i>						
1700 to 1730		2		3		1
1730 to 1800			1	1		2
1700 to 1800		2	1	4		3
<i>Trucks, buses, large vehicles</i>						
1700 to 1730						
1730 to 1800						1
1700 to 1800						1
<b>All vehicles 1700 to 1800</b>	<b>15</b>	<b>4</b>	<b>18</b>	<b>60</b>	<b>7</b>	<b>50</b>
<i>Bicycles</i>						
1700 to 1730			1		1	
1730 to 1800						
1700 to 1800						

**Main Street Vehicle Survey**

Date	Thu 6 December 2018	Time	1700	to	1800
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Survey Point – Church St/Mill Lane Junction

Direction → Type and time ↓	Avenue Rd into Church St	Avenue Rd right to Mill Lane	Church St into Avenue Rd	Church St left into Mill Lane	Mill Lane left into Avenue Rd	Mill Lane right into Church St
<i>Cars</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800	12	24	28	46	63	72
<i>Vans and light vehicles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800					6	7
<i>Trucks, buses, large vehicles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800			3		1	
<b>All vehicles 1700 to 1800</b>	<b>12</b>	<b>24</b>	<b>31</b>	<b>46</b>	<b>70</b>	<b>79</b>
<i>Bicycles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800	1					

### Main Street Vehicle Survey

Date	Thu 6 December 2018	Time	1700	to	1800
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Survey Point – Avenue Rd/South Hall Junction

No data collected as traffic flow to and from the Playing Fields is very low at this time and traffic passing the junction was covered by other recorders

Direction → Type and time ↓	Avenue Rd to South Hall	Avenue Rd to Playing Field	South Hall to Avenue Rd	South Hall to Playing Field	Playing Field to Avenue Rd	Playing Field to South Hall
<i>Cars</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800						
<i>Vans and light vehicles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800						
<i>Trucks, buses, large vehicles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800						
<b>All vehicles 1700 to 1800</b>						
<i>Bicycles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800						

**Main Street Vehicle Survey**

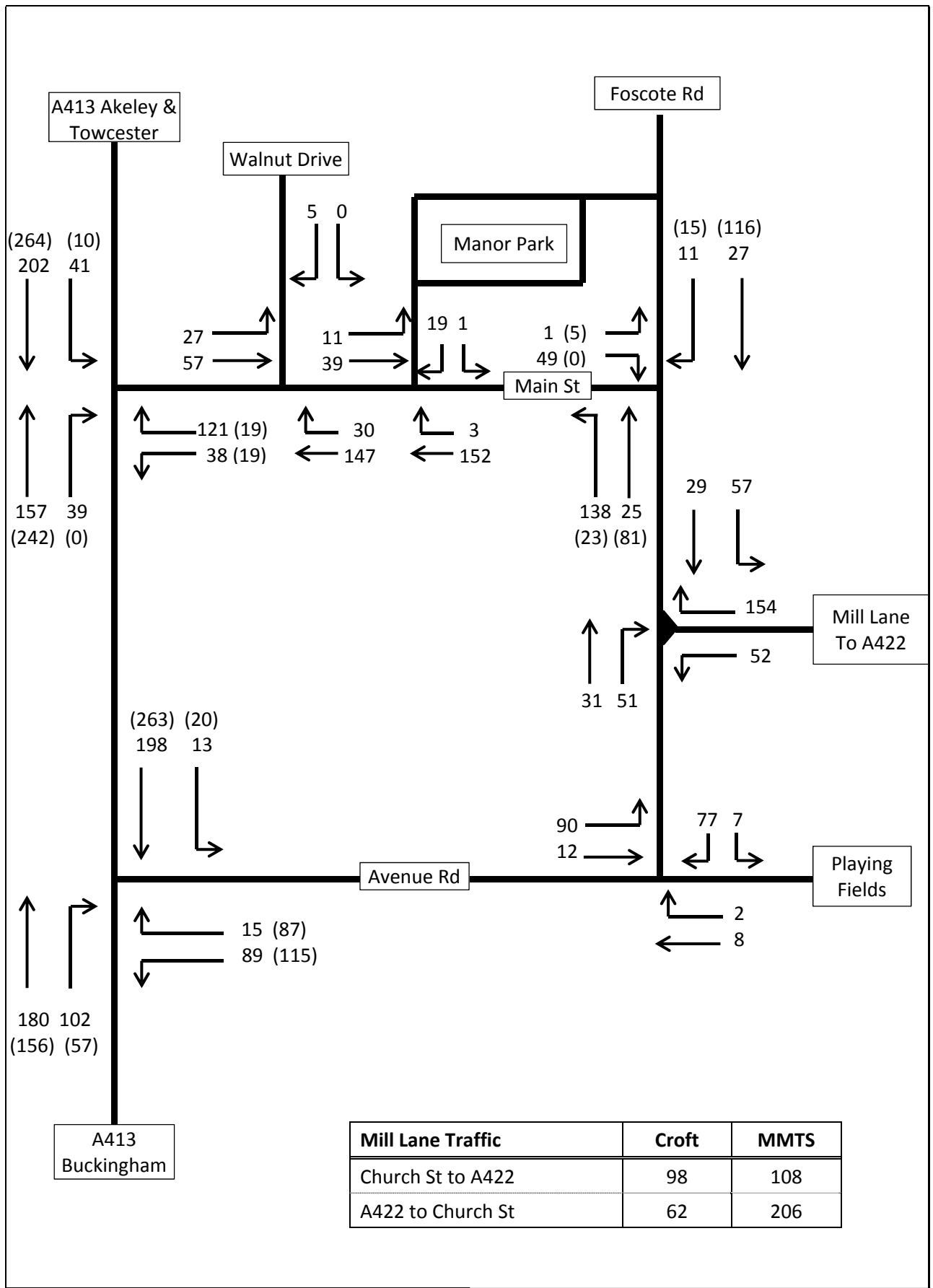
Date	Thu 6 December 2018	Time	1700	to	1800
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Survey Point – Moreton Rd/Avenue Rd Junction

Direction → Type and time ↓	Heading North (Akeley)	Turn Right into Avenue Rd	Heading South (Buckingham)	Turn Left into Avenue Rd	Avenue Rd right to Akeley	Avenue Rd left to Buckingham
<i>Cars</i>						
1700 to 1730	72	26	91	1	5	41
1730 to 1800	66	20	69	1	3	34
1700 to 1800	138	46	160	2	8	75
<i>Vans and light vehicles</i>						
1700 to 1730	8	1	13			4
1730 to 1800	5		4			7
1700 to 1800	13	1	17			11
<i>Trucks, buses, large vehicles</i>						
1700 to 1730	3		1			1
1730 to 1800	3		4			
1700 to 1800	6		5			1
<b>All vehicles 1700 to 1800</b>	<b>157</b>	<b>47</b>	<b>182</b>	<b>2</b>	<b>8</b>	<b>87</b>
<i>Bicycles</i>						
1700 to 1730						
1730 to 1800						
1700 to 1800	1	2	1	1		1

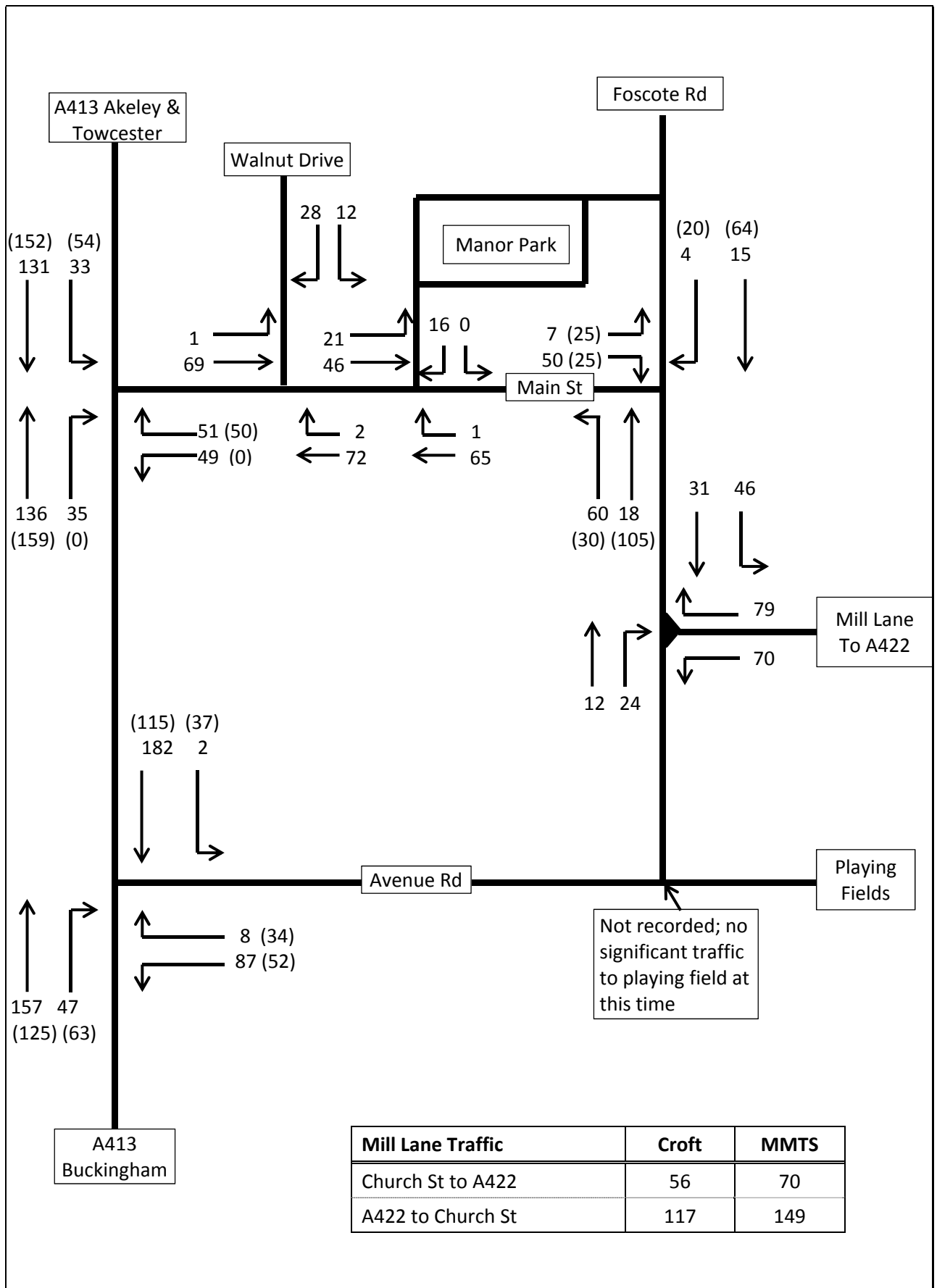


**Annex 6. Diagrammatic Summaries of Results from Morning and Evening Surveys**



**Maids Moreton Traffic Survey**  
 Thu 6 December 2018 – 0800 to 0900  
 Disaggregated data is available

Plain figures are all vehicles counted in MMTS  
 (Bracketed figures from Croft Transport  
 Assessment, June 2018, collected Wed 2 May 2018)

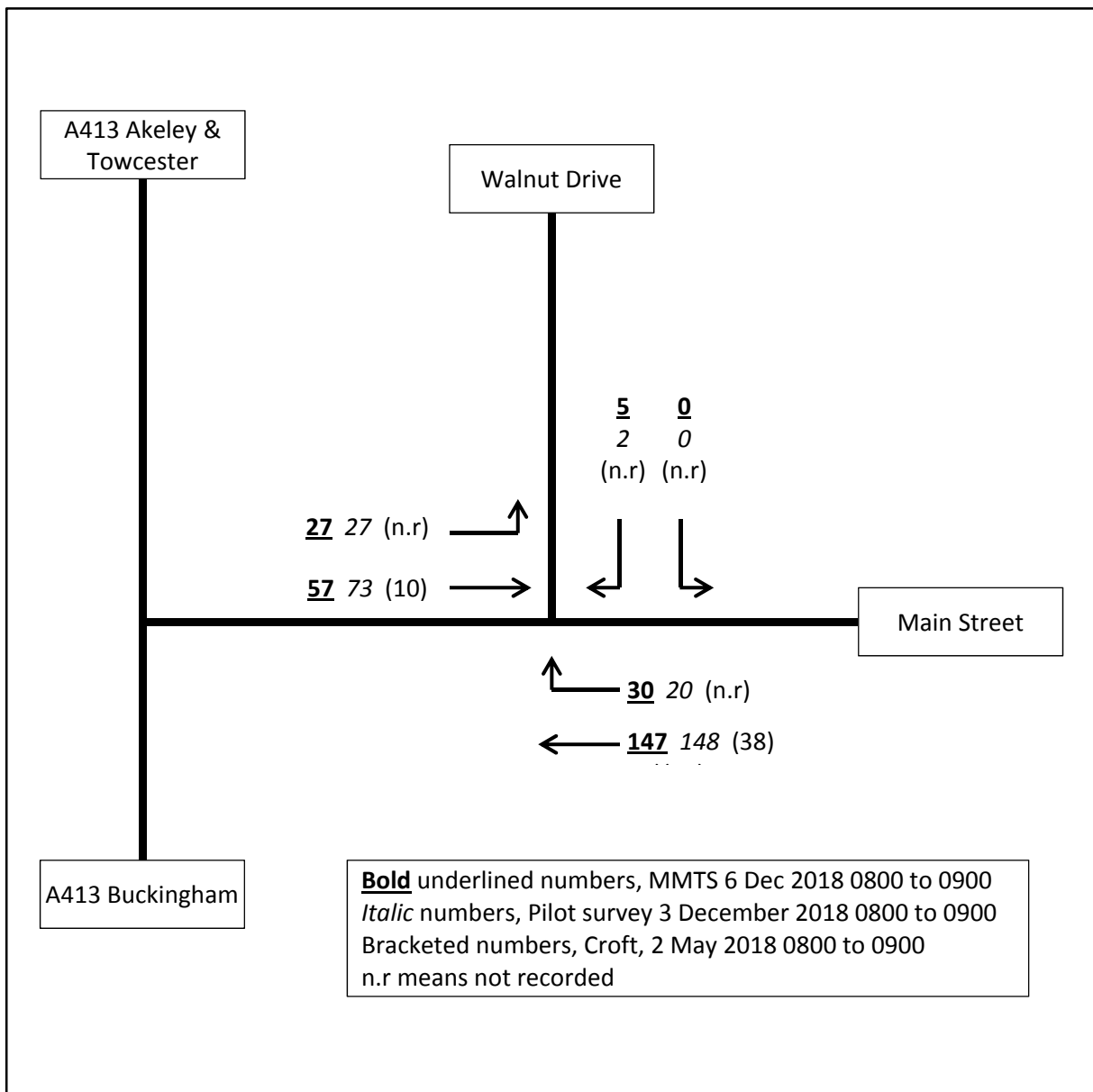


**Maids Moreton Traffic Survey**  
 Thu 6 December 2018 – 1700 to 1800  
 Disaggregated data is available

Plain figures are all vehicles counted in MMTS  
 (Bracketed figures from Croft Transport  
 Assessment, June 2018, collected Wed 2 May 2018)

Annex 7. Traffic Flow Figures for Main St – Walnut Drive Junction

Figure 5 Three Surveys of Traffic Flow at Main St/Walnut Drive Junction



**Annex 8. Vehicle Flow past “The Wheatsheaf” Main St Maids Moreton - 1500 to 1700 - Friday 14 December 2018**

*To Towcester Rd*

Type ↓Time→	1500 to 1530	1530 to 1600	1600 to 1630	1630 to 1700
Cars	38	53	50	40
Vans and Light Goods	6	3	5	8
Heavy Vehicles				
Total in 30 minutes	44	56	55	48
<b>Time →</b>	<b>1500 to 1600</b>		<b>1600 to 1700</b>	
Total in 60 minutes	100		103	

*To Foscoote Rd*

Type ↓Time→	1500 to 1530	1530 to 1600	1600 to 1630	1630 to 1700
Cars	22	39	68	43
Vans and Light Goods	2	5	3	3
Heavy Vehicles	1			1
Total in 30 minutes	25	44	71	47
<b>Time →</b>	<b>1500 to 1600</b>		<b>1600 to 1700</b>	
Total in 60 minutes	69		118	

