5.8: Roads in Twyford

v 1.0 – 16/10/19

5.8.1 Overview:

Twyford is an area of Adderbury to the north and east of the central cross roads, bounded by Twyford Road to the north, Banbury Road to the west, Aynho Road to the south, and fields to the East. The majority of Twyford is accessed from the internal distributor roads of Twyford Avenue or Twyford Grove, via Margaret Road to Rochester Way or Walton Avenue, and then to Deene Close. There is also a route to Rochester Way via The Rise, on which there is a grassed area used by children. In addition, some roads in Twyford are short cul-de-sacs accessed from these roads.

It is a residential area throughout, generally having footways on both sides, and most properties having front gardens. Some properties have off-street parking, but on-street parking is widespread and provides some de facto traffic calming. All the roads within Twyford have a 30mph limit.

5.8.2 Main Issues:

The main issue in Twyford is one of 'rat-running'. At peak times, lengthy queues form at the central cross roads between Banbury Road, Oxford Road and Aynho Road,. When they back-up significantly, some motorists elect to cut the corner between Banbury Road and Aynho Road using the internal distributor road. This not only increases the volume of traffic, but that increase appears to include people who less focussed on travelling with appropriate care for residential 'D' roads.

Concerns have been raised over speeding and volume, and to understand these better, surveys have been carried out on the six internal 'through' roads in Twyford. This has shown significant increases in traffic volume at the morning and evening peaks, and although some of this will be attributable to commuters from Twyford itself, it is believed that this includes a significant number of rat-runners.

The data recorded shows that the average speed in the range of 18 to 23mph, with the 85%ile figures of 29mph (daytime) and 32mph (night-time). There were no records of vehicles exceeding 45mph. The overall driver behaviour therefore exhibits speeds that are commensurate with the types of road present, although inevitably there are a small number that drive inappropriately. The most appropriate solution for reducing the issues faced by those living within Twyford therefore appears to be to reduce the number of vehicles that are rat-running during peak hours.

A visual survey carried out by a resident at 0730 on Thu 5th September 2019 showed that the vehicles waiting at the junction from Aynho Road and Oxford Road (15 on each) all managed to pass through on a single green phase, but only 20 of the 60 vehicles waiting on Banbury Road managed to get through. This resulted in a residual 40-vehicle queue that backed a long way up Banbury Road – by 0800 this reached beyond the Bowls Club. Some vehicles from this queue chose to rat run through the Twyford residential D roads in preference to waiting for up to two further green phases.

A more substantial action has recently been proposed in on-line discussions –closing-off the through-route in Twyford, and turning all roads effectively into Cul-de-Sacs. This is an appealing proposal that would prevent rat-running, and despite the cost of the Traffic Order to legally permit road closures, it would be a relatively low cost and technically straightforward proposal. However, the difficulty lies in identifying where to put the closures, and in securing sufficient support from

residents for the closures and their locations. For example: residents who predominantly head north will want the closures to the south of their properties, and residents who predominantly head south will want the opposite. A resident of Rochester Way noted that he drove towards Banbury and Aynho at different times of the day each weekday, and any closure would be highly inconvenient.

Because of the multiple routes through Twyford, preventing rat-running to avoid the traffic lights completely with a single closure would only be possible by closing the junction of Deene Close with Aynho Road. Although simple and effective, this would push all southbound traffic through The Rise, and would increase the number of residents' vehicles queueing for the lights. Two closures could be effective, but again to prevent rat-running through The Rise, this would need to be at the southern ends of Rochester Way and Walton Avenue. Similar issues would be experienced with large numbers of residents exiting through The Rise. A further option is to put a closure on Margaret Road, giving less impact on The Rise as Deene Close would also be accessible to the residents of south Twyford, but this would not prevent rat-running through The Rise. These complexities, and the difficulty in securing widespread support for precise locations, means that this option is not proposed. However, it has been discussed with OCC, and they would support such a proposal if residents carried out formal consultations and were able to secure a very high level of support from residents.

5.8.3 Overview Photographs:

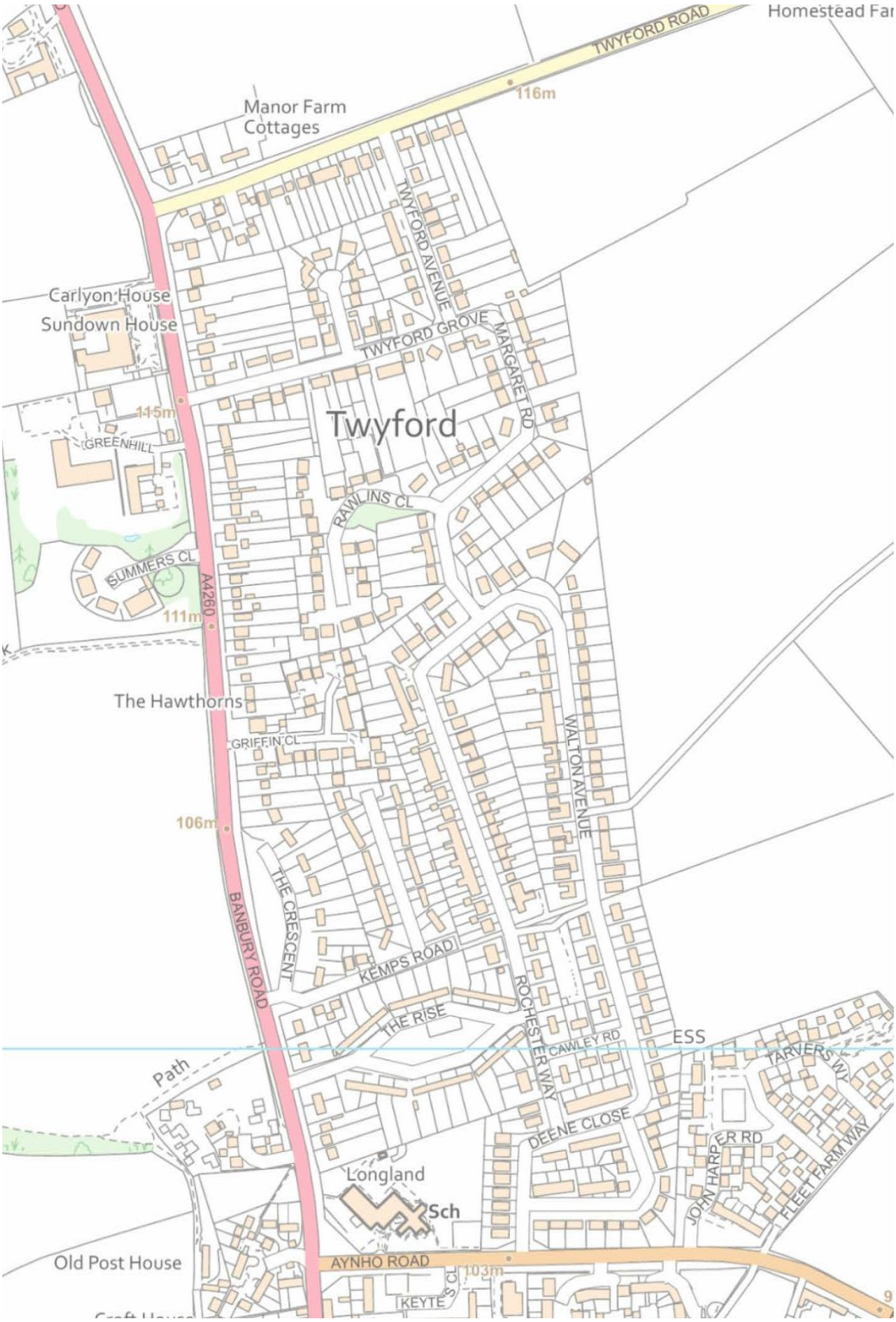
S/B Twyford Avenue

W/B Twyford Grove

N/B Twyford Avenue

S/B Margaret Road to Walton Av and Rochester Way

5.8.4 Location:



5.8.5 Measures Proposed:

All work to be developed by APC unless otherwise noted.
References relate to column and row references in 'Traffic Calming Measures' spreadsheet.

C0: General

The number of measures proposed for the roads in Twyford is limited compared to the other roads contained in this report, and this is primarily for two reasons. Firstly, the level of speeding recorded by the surveys is very small compared to most of the other roads measured. Secondly, the primary issue appears to be one of rat running, and therefore rather than introducing signage, constraints, or even 20mph zones within Twyford, by far the most effective solution appears to remove the incentive that motorists have to 'cut the corner' in the first place. The proposal to improve the sequencing of the traffic lights at the centre of the village should make a significant difference to the through-flow at the junction, and thus make a corresponding reduction in any gains that might be made from through traffic using the roads within Twyford. If this is not effective, then it would be appropriate to consider the further options listed in 5.8.6.

C7: Hazard Signage

'Children Playing' signage is already in place on The Rise. These need to be kept clean.
Action: local residents.

C8: Calming Signage

CDC calming signage that ask drivers to be considerate is available and should be erected in both directions along the main distributor roads.

C19: Sequencing of Traffic Lights

Prior to 0800, the disproportionate queue lengths on Banbury Road could be reduced by increasing the length of the green phase for that approach to permit 40 or more vehicles to pass through, without significant detriment to the other directions.
From 0800 the queues back-up for a significant distance on all three main approaches. The solution here may be to increase the length of the green phase for all three main approaches, possibly continuing with a proportionally longer green phase for the Banbury Road approach. The inefficiency of traffic signals is the amber and all-red time, and any increase to the proportions of green relative to red should increase throughput. Individual red time for each arm of the junction would correspondingly increase, but at no overall detriment to the majority of queueing traffic.
If relative traffic flows are reversed in the evenings, then a reverse approach may be needed.
OCC Highways have installed a new MOVA control system to manage the sequencing of the lights. It is a new, high tech method of controlling the lights – one of only two on trial in Oxfordshire. This was funded and installed in the 2018/19 financial year, but could not be commissioned and put into operation until the 2019/20 financial year.
OCC Highways were finally able to commission the system and put it into operation in September 2019, and it will now be monitored to assess its effectiveness. It is expected that increased throughflow of traffic at the main junction will reduce the numbers choosing to 'rat run' through the residential D roads.

C21: Community Speedwatch

There are numerous posts and lamp columns that could be used to host the fixed speedwatch camera. Traffic survey data indicates that speeds are the highest on Rochester Way.

If residents of Twyford are keen to provide a physical deterrent to the proportion of motorists that do exceed the speed limit, then a Speedwatch groups could be formed.

5.8.6 Possible Further Work

C8: Calming Signage

Further traffic calming signage such as the green-on-white- '20s plenty' would appear appropriate as a first next stage, if the initial proposals are insufficiently effective.

C11: Speed Bumps/Humps

Introducing these would reduce the attractiveness of the Twyford Roads as a rat run, but are likely to introduce noise and vibration issues for those living in the immediate vicinity of them. They are therefore not proposed at present, at least until the impact from the improvements in the sequencing of the traffic lights has been assessed.

C12: Constraints on Roadway

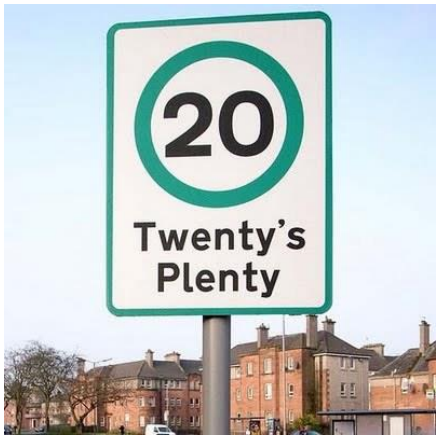
A number of constraint-related traffic calming options are available, and most involve relocating the effects of parked cars through build-outs. Some of the most effective are those that require give-and-take moves by traffic moving in opposite directions. However, as the overall level of traffic within Twyford is relative low (20 to 30 per hour typically, up to three times that at peak times), they will be less effective than on roads where higher traffic flows force more frequent giving and taking.

C13: 20mph Zones

These take the approach in C12 above a significant step further, but have a number of limitations – chief of which is that TVP will not enforce them, plus they are potentially expensive solutions to a different problem. This could however be considered as an option of last resort if none of the other measures listed are effective. Other roads in Adderbury have much more serious speeding issues that should be prioritised prior to considering this.

5.8.7 Examples of Work Proposed

Reduced Queues at Central Traffic Lights



"20's Plenty"Signs