Boorley Green traffic calming options appraisal

Increasing traffic volume and vehicle weights in the original hamlet of Boorley Green is recognised as a problem within Botley Parish. Prior to the Boorley Park residential development Boorley Green was a small hamlet of about 200 houses. There was very little traffic on the residential roads within the hamlet and few Heavy Goods Vehicles (HGVs).

Within Boorley Green the residential roads requiring consideration are:

- Maddoxford Lane. The eastern part is essentially a country lane with a relatively narrow bridge at Ford Lake and occasional flooding in the winter. The western part is residential and unfortunately the straight downhill hill nature of the Lane, facing east from the brow of the hill, leads to speeding and HGVs making undue noise and vibration.
- Oatlands Road. The road surface is substandard, probably because the road base is inadequate for the current traffic load, especially for heavy vehicles.
- Crows Nest Lane. The Lane is narrow, there is a double 90^0 bend that the residents believe is dangerous. This is a road safety matter and is discussed in the Transport Paper (paragraphs 7.7b and 7.8e).
- Kingsman Drive. The main exit spine road from Boorley Park, giving access to Winchester Road. The roadway is unlikely to be adopted by Hampshire County Council (HCC) until the end of the Boorley Park development.
- Wallace Avenue. The secondary exit from Boorley Park into Maddoxford Lane. On Wallace Drive are the new Sports Fields and Community Centre and on Nairn Road (turning off Wallace Avenue) is the new Boorley Park Primary School and Nursery School. The roadway is unlikely to be adopted by HCC until the end of the Boorley Park development.
- Winchester Road. This is used by some HGVs to reach Woodhouse Lane and then the A334. HGVs going to the M27 should use the preferred route from Denham's Corner via the B3342 (Bubb Lane) but HGVs going eastwards are likely to use Winchester Road to reach the Botley Bypass.

As part of the Boorley Park development Section 106 funding was set aside for traffic calming measures within Boorley Green. The prime purpose of the traffic calming was to reduce the traffic volume and the number of HGVs transiting but not delivering in the original hamlet of Boorley Green. The Hampshire County Council (HCC) traffic census data from 2017 to 2019 is shown in Table 1. The recent demolition of the old relatively low height railway bridge crossing Wangfield Lane east of Netherhill Lane may well result in increased east-west HGV transit.

Traffic speed in Maddoxford Lane was a cause of concern. Recent Speed Indicator Device (SID) data shows speeding appears to be no more of a problem in Maddoxford Lane than on Winchester Road but the road design in Maddoxford Lane makes speeding vehicles a greater problem. SID data shown in Table 2. Other issues that caused concern were the dangers in Crows Nest Lane and the impact of HGV developer vehicles in Maddoxford Lane. In reality only an appropriately placed road closure will achieve the prime purpose. Other traffic calming measures like speed cushions or pinch points to reduce speed, mitigation measures for the double bend in Crows Nest Lane for road safety, working with Eastleigh Borough Council during planning applications to direct developer traffic along the best route or routes and instituting a 7.5 tonne weigh limit on the remainder on Winchester

Road through Boorley Green might be required. In September 2020 Foreman Homes agreed to an advisory 20 mph speed limit for site traffic using Maddoxford Lane to reach their site to the east of Crows Nest Lane.

Opening of the Botley Bypass is key to gaining the benefits of traffic calming within Boorley Green without increasing traffic volume through central Botley along the High Street and Broad Oak. However, there is still a significant risk that east-west traffic trying to avoid the Bypass will travel through residential areas in Boorley Green. Also, traffic might be drawn to Maddoxford Lane as a route to the Bypass. There are several new developments off Maddoxford Lane in addition to Boorley Park that will increase traffic in Boorley Green.

Regarding any future consultation although the amenity of residents in the original hamlet of Boorley Green is important but so is the amenity of the newer residents in Boorley Park and the future residents of developments along Maddoxford Lane and for those accessing the community facilities in Boorley Park.

Hampshire Highways are likely to consult a larger area of Botley Parish other than just Boorley Green and the western part of Curdridge Parish, as their remit is to consider all local road users. For Hampshire Highways to recommend supporting any option proposed in the consultation it would need probably to use a single modal filter (any measure at a single point in a roadway that allows passage of some modes of transport but not others, for example a road closure to vehicles that allowed passage of pedestrians, cyclists and emergency vehicles) and there would need to be significant support for the option.

Any traffic calming scheme in Boorley Green would require assessment of traffic flows by Hampshire Highways and this might mean that the assessment would be delayed until:

- the new Primary School had a defined number of year-group classes;
- the new Nursery was opened;
- Wallace Avenue was fully opened;
- Some or all of the additional development towards the eastern end of Maddoxford Lane was completed; and
- the Botley Bypass was opened.

Two traffic calming schemes, shown in Table 3, using single road closure were developed by the Botley Neighbourhood Plan Committee. Two non-road closure schemes, new weight limit and speed cushions and/or pinch points shown in Table 4, were considered to be possible additional road calming measures. A number of other road closure sites were considered and felt to be inappropriate. Any proposed calming scheme should aim to maintain or improve access and safety for cyclists and pedestrians.

Table 1 - HCC traffic census data recorded from 7.00 am to 7.00 pm on one weekday in October 2017, October 2018 and November 2019, except for Maddoxford Lane west of Netherhill Lane where there was no census point in 2017. This census measures vehicle movements in both directions and the result in the table shows total vehicle movements in both directions past the census points.

	Cars						HGVs		
	2017	2018	% change 2017-18	2019	% change 2018-19	% change 2017-19	2017	2018	2019
Crows Nest Lane	524	441	-15.8%	516	+17.0%	-1.5%	12	4	4
Oatlands Road	346	431	+24.6%	447	+3.7%	+29.2%	2	14	11
Maddoxford Lane west of Oatlands Road	936	1163	+24.3%	1383	+18.9%	+47.8%	9	12	19
Maddoxford Lane west of Netherhill Lane	-	1581	-	1754	+10.9	-	-	8	10
Wangfield Lane	1438	1596	+11%.0	1791	+12.2%	+24.5%	10	8	10

Table 2 - SID data. SID measures vehicle movements in the direction it is facing

	Monitored	Limit	Location of SID
Winchester Road	21-26 Jul 2020	30 mph	Close to Oatlands Road junction, facing south so measuring north bound traffic
Maddoxford Lane	03-06 Sep 2020	30 mph	Between Oatlands Road and Crows Nest Lane, facing west so measuring east bound traffic. The temporary closure of Wangfield Lane at the site of the old railway bridge ceased on 24 August

	Mean traffic speed	% of traffic over speed limit	Mean speed of those over speed limit	Maximum speed recorded	Mean traffic volume per 24 hours		
					Thursday and Friday	Saturday and Sunday	Thursday to Sunday
Winchester Road	28.2 mph	42.9%	34.5 mph	55 mph	3711	2218	2965
Maddoxford Lane	24.6 mph	12.5%	33.1 mph	55 mph	503	414	458
					Mean traffic volumes from 7.00 am to 7.00 pm		
Winchester Road					3025	1785	2405
Maddoxford Lane					459	364	411

Table 3 - Possible traffic calming options		
Scheme	Advantage	Disadvantage
SCHEME 1 Close Maddoxford Lane at or just to the west of Ford Lake Bridge (western branch of the Hamble River) without obstruction to pedestrian and pedal cycle traffic. (See Figure 1)	• Stops all east/west traffic transiting from Bishops Waltham or Curdridge to Winchester Road along Maddoxford Lane, Crows Nest Lane and Oatlands Road by separating Netherhill Lane and Wangfield Lane from Maddoxford Lane, so reduces traffic volumes. • Does not increase traffic through Boorley Park. • Does not require residents in new dwellings off the eastern part of Maddoxford Lane to transit Boorley Park to reach Winchester Road or central Botley. • Allows access to Boorley Park Community facilities from central and western Botley without transiting Boorley Park. • Bishops Waltham and Curdridge traffic would have to access the Botley Bypass at its eastern end, A3051/A334 roundabout.	• Reduction in traffic volumes in Maddoxford Lane, Oatlands Road and Crows Nest Lane would be less than Scheme 2 because of some traffic from eastern Boorley Park, from the new dwellings off the eastern part of Maddoxford Lane, from traffic going to Boorley Park Community facilities from central and western Botley transiting these roads. • Additional calming measures to control speeding in Maddoxford Lane might be necessary. • Denies local traffic from Boorley Green direct access to Wangfield Lane.
SCHEME 2 Close Maddoxford Lane to the east of Crows Nest Lane and to the west of its junction with Wallace Avenue without obstruction to pedestrian and pedal cycle traffic. (See Figure 2)	• Stops all east/west traffic transiting from Bishops Waltham/Curdridge to Winchester Road along Maddoxford Lane, Crows Nest Lane and Oatlands Road so reduces traffic volumes. • Consistent with the road layout at the Maddoxford Lane/Wallace Road junction.	• All east/west traffic transiting from Bishops Waltham or Curdridge to Winchester Road would transit through Boorley Park, where it would pass close to a Nursery and a Primary School. • Requires residents in new dwellings off the eastern part of Maddoxford Lane to transit Boorley Park to reach Winchester Road or central Botley. • Partially isolates all or some of the new dwellings off the eastern part of Maddoxford Lane from central Botley by requiring transit through Boorley Park or Wangfield Lane. • Denies local traffic from the older part of Boorley Green direct access to Wangfield Lane. • Access for all road users to the Boorley Park Community facilities would be through Boorley Park.

		• All construction traffic for the actual or potential development sites on the western part of Maddoxford Lane would have to pass through Boorley Park, currently along roads not adopted by Hampshire County Council.

Table 4 - Other possible traffic calming options that could be considered in addition to Scheme 1 or Scheme 2		
Type and/or Location	Advantage	Disadvantage
Create *7.5 tonne Weight Limit* on Winchester Road from Denhams Corner to the junction with Winchester Street and down Woodhouse Lane to the new roundabout at the west end of the Botley Bypass (See Figure 2).	• Reduce HGV traffic.	• Would create a long route for HGVs coming from the north on the B3354 and planning to go to the east along either the A334 or the A3501, as would not be able to go direct to the Botley Bypass. • Difficult to enforce weight restrictions.
Installing speed cushions might be considered on: • Maddoxford Lane • Wallace Avenue • Kingsman Drive. (See Figure 1).	• Probable speed reduction. • Possible reduction in traffic volume as drivers try to avoid roads with speed cushions.	• Speed cushions may increase in road surface noise, although with the correct design of cushion the increase in road noise can be reduced.
Installing pinch points (road narrowed to single lane with directional priority) might be considered on: • Maddoxford Lane • Wallace Avenue • Kingsman Drive. (See Figure 1).	• Pinch points are a good indicator that traffic is entering or within a residential area. • Probable speed reduction. • Possible reduction in traffic volume as drivers try to avoid roads with pinch points.	• Pinch points may encourage speeding by motorcycles and so increased road noise and lowered road safety. • Special arrangements may be necessary for pedal cyclist safety if traffic volumes remain high.
Reduce the 60 mph speed limit on the part of Wangfield Lane just to the east of Netherhill Lane to Maddoxford Lane just to the east of its junction with Wallace Avenue to 30 mph. (See Figure 1).	• This would give a consistent speed limit along the whole of Wangfield Lane and Maddoxford Lane • Reduce the likelihood of excess speed along a small rural road (in practice would not be required with Scheme 1).	• No clear disadvantage.

Figure 1 - location for some of the traffic calming measures discussed.

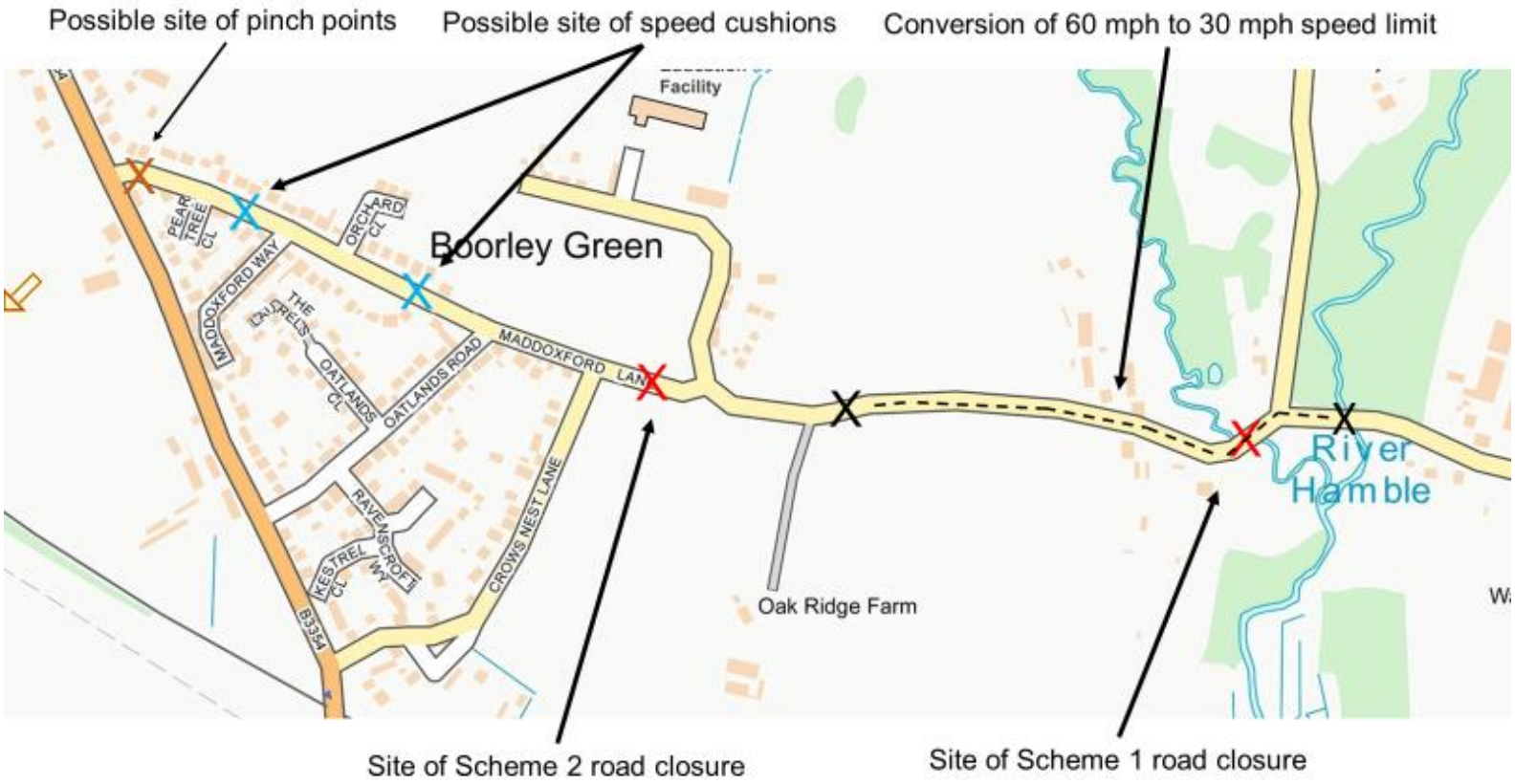

Figure 2 - Suggested 7.5 tonne weight limit, existing 7.5 tonne weight limit, current and possible designated HGV routes and route of Botley Bypass.