

WOKINGHAM DISTRICT COUNCIL

**A MEETING OF THE
HIGHWAYS BOARD**

WILL BE HELD AT THESE OFFICES

ON

TUESDAY 15 JULY 2003

AT

7.00 PM

in Committee Room 1

YOU ARE WELCOME TO ATTEND

**MEETING OF THE
HIGHWAYS BOARD
ON
TUESDAY 15 JULY 2003
AT
7.00 PM
in Committee Room 1
AGENDA**

**Civic Offices
Shute End
Wokingham
Berkshire**

**Doug Patterson
Chief Executive**

TITLE: BEARWOOD ROAD – SAFETY STUDY
REPORT PREPARED FOR: HIGHWAYS BOARD – 15TH JULY 2003
REPORT PREPARED BY: KATE FULLER-WOKINGHAM DISTRICT
COUNCIL/PARKMAN

SUMMARY:

To inform the Highways Board of the results of an investigation regarding traffic speeds and safety along Bearwood Road.

ALTERNATIVE OPTIONS, IF ANY:

- a) Northern section - approve option one in conjunction with option three; and
- b) Central section – do nothing; and
- c) Southern section - approve options one, two and four; and
- d) Do nothing.

RECOMMENDATION:

It is recommended that the Highways Board advise the Executive to:

- a) approve Options one and two for the northern section of Bearwood Road as detailed in paragraphs 1.15 – 1.17 in principle, subject to funding; and
- b) approve Options one and two for the central section of Bearwood Road , as detailed in paragraphs 1.24 and 1.25; and
- c) approve Options one, two and three for the southern section of Bearwood Road, as detailed in paragraphs 1.32, 1.33 and 1.34; and
- d) authorise the advertisement and formal consultation of the Traffic Regulation Order detailed in paragraph 1.34 and consider any objections which may be received and if no objections are received, to authorise the introduction of the Order.

Background Papers

Held by: Kate Fuller - Team Leader, Traffic Management
Division: Engineering Services
Dept: Environmental Services
Contact No: 0118 974 6304
E Mail: kate.fuller@wokingham.gov.uk

NB: All reports seek to identify environmental, community safety and equal opportunities implications. Consultation with residents and organisations which has or is about to take place, will also be reported.

1 BACKGROUND

- 1.01 Drawing nos. 1002121.15/COM/0031/A, 1002121.15/COM/004/A, 1002121.15/COM/005/A, 1002121.15/COM/006/A and 1002121.12/COM/007/A are attached to this report for information.
- 1.02 Members may be aware of the Stage I and II petition reports submitted to the July and October 2002 Highway Boards respectively, regarding Bearwood Road. The Stage II petition report considered the whole length of Bearwood Road from its junction with King Street Lane in the north to Barkham Road in the south and investigated measures which could be implemented to improve road safety.
- 1.03 Following the Stage II report it was approved that the speed limit on the central section of Bearwood Road be reduced from derestricted to 40mph when funding had been identified.
- 1.04 Bearwood County Primary School is programmed for commencement of the design of their Safer Routes to School Scheme in 2004/2005 which could include measures to reduce vehicle speed and road safety immediately outside the school.
- 1.05 Bearwood Road is part of the local bus network and will regularly be used by emergency vehicles to gain access to large residential areas. Consequently, any measures that are implemented must not compromise their ease of passage.

Northern section of Bearwood Road Background

- 1.06 In the October 2002 Highways Board report, the areas of public concern highlighted along the northern section of Bearwood Road were measures to reduce vehicle speeds, road safety outside Bearwood School, and improvements to the junction of New Road with Bearwood Road.
- 1.07 Options for the proposed measures associated with the speed limit reduction included:
- coloured surfacing patches to raise driver awareness; and
 - minor carriageway realignment at the junction of New Road with Bearwood Road; and
 - a priority GIVE WAY feature north of the entrance to Bearwood County Primary School; and
 - road narrowing allowing 2-way traffic flow south of the junction with New Road; and
 - improved gateway signing and road narrowing allowing 2-way traffic flow just south of St Catherine's Church.

Accidents

- 1.08 An investigation of the accident database indicates there have been six recorded personal injury accidents in this section of Bearwood Road during the last three years. There has been one serious and five slight injury accidents, details and locations of which are shown in table 1.08 and drawing no. 1002121.12/COM/007/A respectively.

Ref	Severity	Manoeuvre	Reason	Day/ Night	Road condition
A	Slight	Rear end shunt	Close tailing	Daylight	Dry
B	Slight	Turning	Driver failed to look	Daylight	Dry
C	Slight	Poor turn	Poor road condition	Daylight	Frost/ Ice
D	Slight	Loss of control of vehicle	Driver drunk	Dark	Wet/ Damp
E	Slight	Loss of control of vehicle, driver drunk.	Driver drunk, excessive speed	Dark	Wet/ Damp
F	serious	Rear end shunt	Glare from sun	Dark	Wet/ Damp

Table 1.08

- 1.09 The two recorded personal injury accidents at the New Road/ Bearwood road junction can be attributed to the large turning radii available for entering and exiting the junction. Little reduction in speed is required to accommodate this junction in dry weather conditions.

Speeds

- 1.10 A speed survey was undertaken at the location shown on drawing number 1002121.15/COM/007/A in August 2002. The 85th percentile speed was recorded as 49mph. This is slightly higher than would be expected.

Problems

- 1.11 During term time it has been observed that for up to 45 minutes before school time starts and finishes, parents park on the carriageways of Bearwood Road and New Road. The nature of the parked vehicles creates chicane effects on both roads, of up to 100m long, and can cause potentially dangerous situations at the New Road junction, along New Road, and along Bearwood Road just north of the school. Vehicles tend to turn left into New Road at relatively high speeds to face on-coming traffic overtaking the parked vehicles. The location of parked vehicles can be seen on drawing number 1002121.15/COM/0031/A.
- 1.12 The parked vehicles along Bearwood Road conflict with the location of the proposed buildout, possibly leading to illegal and dangerous parking. Since the parked vehicles currently serve as traffic calming, a physical buildout on Bearwood Road is not recommended. A permanent fixed feature may also lead to poor driving behaviour, e.g. drivers "racing" for the gap. During site visits, there was no sighting of vehicles parked in front of driveways.
- 1.13 The implementation of a mini-roundabout at the junction of New Road was investigated for the October 2002 Highways Board. It was considered unsuitable due to the accesses to residential properties at this location.
- 1.14 Parked vehicles outside St Catherine's Church have been highlighted as a potential problem during times of services and special occasions. There has however, been only one accident near this location in the last ten years. This was a rear shunt accident due to a car slowing down and resulted in one slight casualty. It is thought that during periods when vehicles are parked at this location, other motorists are more aware and drive more carefully.

Possible solutions

1.15 Option one – Provide experimental parking restrictions along Bearwood Road and New Road

Provide experimental traffic calming in the form of designated parking on Bearwood Road and New Road as shown on Drawing 1002121.15/COM/003/A. These measures are in order to ensure safer parking and overtaking of parked vehicles.

During peak periods, this will allow motorists to wait between shorter lengths of parked vehicles, before continuing on the opposite side of the carriageway. Lengths of carriageway where parking is to be prohibited should be denoted by plastic road marker cones and monitored for at least four days. If successful, a permanent Traffic Regulation Order could be introduced to replace the locations of the road marker cones with permanent double yellow lines.

The “SCHOOL KEEP CLEAR” markings in front of Bearwood School are not required in the area where they currently are. During the morning and afternoon peak traffic periods, children do not cross directly in front of the school, since there is no footway on the opposite side of the carriageway. It is therefore recommended that the “SCHOOL KEEP CLEAR” markings are reduced in length to cover the access of Bearwood School and the remainder kept available for parking spaces.

1.16 Options two and three – Amendments to junction

The speed survey information indicates that the existing 85% percentile speed of traffic is 49mph (as stated in October 2002 Stage 2 report). This is slightly higher than would be expected for a 40mph speed limit. Motorists continue these higher speeds when entering New Road from Bearwood Road which can create problems. It is therefore recommended that the alignment of New Road/Bearwood Road junction be amended to facilitate safer manoeuvres at this junction.

The following two options would ensure that motorists reduce their speeds when entering New Road. They also provide safe crossing points at locations where vehicles will not be parked.

1.17 Option two – Amend New Road junction alignment

Realign the junction of New Road at Bearwood Road by positioning the entire junction to the north of the island in New Road as shown on drawing no. 1002121.15/COM/005/A. This allows a more standard junction to be provided; ensuring slower speeds are used when using the junction. Footway and crossing facilities can be provided at both sides of the junction in safe and easily visible locations. The soft landscaping of the surplus land could provide an area that reflects the nature of the neighbourhood, and timber knee-rails could control parking on the junction.

1.18 Option three – Amend New Road junction alignment on the westbound and eastbound approach

This alternative proposal involves realigning the eastbound and westbound approaches of the New Road/ Bearwood Road junction as shown on drawing no. 1002121.15/COM/005/A. On the eastbound approach this design will provide a longer length of 2m wide footway. The crossing point will have improved visibility and is located further from the junction. On the westbound approach, the turning

radius and carriageway width have both been decreased to ensure slower speeds when entering New Road. The soft landscaping of the surplus land would provide an area that reflects the nature of the neighbourhood, and timber knee-rails would control parking on the junction.

- 1.19 Discussions have been held with ward Members regarding these proposals and although generally in favour of the proposals, they believe that possible development in the area and the Safer Routes to Schools project for Bearwood school will have a bearing on the scheme. It is recommended, therefore that Options one and two be approved in principle, subject to funding and that no works be undertaken at the current time.

Central section of Bearwood Road

Accidents

- 1.20 An investigation of the accident database indicates there have been seven recorded personal injury accidents in this section of Bearwood Road during the last three years. There has been one serious and six slight injury accidents. Details and locations are shown in Table 1.20 and Plan 1002121.12/COM/007/A respectively. There is no street lighting in this section of Bearwood Road.

Ref	Severity	Manoeuvre	Reason	Day/ Night	Road conditio n
G	Serious	Wing mirror hit pedestrian walking with back to traffic	Driver drunk. Excessive speed	Dark	Dry
H	Slight	Poor overtaking, hit oncoming vehicle	Inattention	Dayligh t	Dry
I	Slight	Loss of control of vehicle	Excessive speed	Dark	Wet/ Damp
J	Slight	Poor overtaking, hit oncoming vehicle	Failed to judge others speed	Dayligh t	Dry
K	Slight	Motorist hit cyclist travelling in same direction	Failed to judge speed	Dayligh t	Wet/ Damp
L	Slight	Loss of control of vehicle	Excessive speed	Dayligh t	Dry
M	Slight	Rear end shunt	Failed to judge others speed	Dayligh t	Dry

Table 1.20

Speeds

- 1.21 At the October 2002 Highways Board, Members approved to reduce the existing national speed limit on the central section of Bearwood Road to 40mph. Speed survey locations are shown on Plan 1002121.15/COM/007/A. The results, detailed below, do not support this change in speed limit.

Location	Date of survey	85 th percentile speed
South of Highlands Avenue	August 2002	50mph
North of Highlands	April 2003	49mph

Avenue		
South of Bearwood Lakes entrance	May 2003	51mph

Table 1.21

- 1.22 If the speed limit is to be reduced to 40mph, further measures will be required to bring the 85th percentile speed to within acceptable levels. Additionally if a 40mph speed limit is applied to the entire length of Bearwood Road, there will be no distinction between the built-up and more rural sections of the road.
- 1.23 A 40mph speed limit does not reflect the nature of the central section of Bearwood Road, and is likely to be ignored by a substantial proportion of motorists who may travel at higher speeds. It is unlikely that these motorists will reduce their speed on approaching the northern or southern section of Bearwood Road, if no change in speed limit is provided.

Possible solutions

1.24 Option one – Reduce the speed limit from derestricted to 50mph

Speed surveys undertaken on Mole Road (detailed elsewhere in this Agenda) allow for a 50mph limit to be implemented. The Institute of Highways and Incorporated Engineers (IHIE) recommend an imposed 50mph speed limit on this type of road. For the reasons stated in paragraphs 1.20 – 1.23, it is recommended that the speed limit on this section of road be reduced from the national speed limit (60mph) to 50mph. This will allow for distinction between the built up and non-built up areas along Bearwood Road and will be consistent with the speed limit along Mole Road.

1.25 Option two – Provide width restrictions at speed limit terminals

Width restrictions on Bearwood Road allowing two-way flow were recommended at the speed limit terminal signs in the stage 2 report at the October 2002 Highways Board. A carriageway width of 4.8m will allow the passing of a wide car with a large service vehicle. It is recommended that width restrictions of 4.8m be applied at the speed limit terminal signs in the form of solid white lines with hatched road markings on the carriageway.

Southern section of Bearwood Road

Background

1.26 Options for proposed measures associated with the speed limit reduction included:

- enhanced gateway signing and reduced carriageway width allowing two-way flow, just south of Highlands Avenue; and
- coloured surfacing patches to raise driver awareness; and
- new width restriction allowing two-way flow just north of the crossroad junction.

1.27 The original petition submitted to the July 2002 Highways Board requested improved signage to highlight the junction with Coombes Lane/ Sandy Lane with Bearwood Road and the speed limit at the brow of the nearby hill. There are currently “Crossroad junction ahead” warning signs on both approaches to the crossroad junction, though visibility of the sign on the southbound approach is currently poor. The visibility of the 40mph speed limit change on the southbound is also insufficient.

- 1.28 Concerns were also raised regarding the drainage of surface water outside house nos. 98, 100 and 102. During this period of assessment of Bearwood Road, there were no sustained periods of rainfall. There was a little ponding on the accesses to the mentioned houses after short periods of rain. The drainage would be better assessed during a season with heavier rainfall.

Accidents

1.29 An investigation of the accident database indicates there have been two recorded personal injury accidents in this section of Bearwood Road during the last three years. Both were serious injury accidents. Details and locations are shown in Table 1.29 and drawing no. 1002121.12/COM/007/A respectively.

Ref	Severity	Manoeuvre	Reason	Day/ Night	Road condition
N	Serious	Turning	Driver looked but did not see	Dark	Dry
O	Serious	Turning	Excessive speed, failed to judge other's speed	Daylight	Dry

Table 1.29

Speeds

- 1.30 The measured 85th percentile speeds recorded in this section are as shown below:

Location	Date of Survey	85 th percentile speed
North of The Lilacs	August 2002	39mph
South of Highlands Avenue	August 2002	50mph
North of Highlands Avenue	April 2003	49mph

Table 1.30

- 1.31 The current change in speed limit on the southern section of Bearwood Road is situated just north of the Coombes Lane/Sandy Lane crossroad junction. An extension of the 40mph speed limit to just north of Highlands Avenue was investigated, but current speeds do not support this action see the table above without further speed reducing measures. These speeds would not support a reduction in speed limit to 30mph without engineering measures. Existing accident records would not support the installation of a safety camera. It is thought that a 50mph speed limit on the central section of Bearwood Road will encourage lower average speeds as motorists enter the 40mph speed limit zones.

Possible solutions

- 1.32 **Option one – Implement bollards at the junction of Coombes Lane/ Sandy Lane with Bearwood Road**

In order to highlight the junction of Bearwood Road with Coombes Lane and Sandy Lane it is recommended that wooden reflective bollards are located at this junction, as shown on drawing 1002121.15/COM/006/A. This will further define the lineation of the junction.

1.33 **Option two – Cut back foliage**

Current visibility of the 40mph speed roundels in this section is poor. This can be attributed to the span of trees on the southbound approach between house number 100 and the track to Quandon House, as shown on Drawing 1002121.15/COM/006/A. It is recommended that the span of the trees be trimmed so that visibility requirements are fulfilled.

1.34 **Option three – Extend the 40mph speed limit and introduce a vehicle activated 40mph roundel sign**

The current 85th percentile speed just north of Highlands Avenue is 49mph. It is recommended that the current 40mph speed limit be relocated just north of Highlands Avenue, and for this speed limit to be enforced with a vehicle activated “40mph” sign.

Vehicle activated signs are fairly low cost, low maintenance, self enforcing and effective. It could be located just north of the crossroad junction which would provide a larger impact in encouraging motorists to reduce their speed, especially at the junction and peak of the hill. The sign will illuminate when triggered by motorists travelling at speeds inappropriate for this speed limit.

Recommendations for the location of the vehicle activated sign and 40 mph roundels are shown on drawing no. 1002121.15/COM/006/A. It is recommended that a 7-day continuous automatic traffic survey be carried out to define various percentile speeds to deduce suitable activation speeds of the signs and that monitoring take place 12-24 months after installation.

1.35 **Option four – Provide a vehicle activated “crossroads ahead” sign**

An alternative to option three above is to provide a vehicle activated “crossroads ahead” sign. It could be installed north of the crossroads junction as shown on drawing no. 1002121.15/COM/006/A.

The sign will illuminate when triggered by motorists travelling at speeds unsuitable to negotiate this hazard

2 OPTIONS OR RECOMMENDED ACTION

2.01 It is recommended that the Highways Board advise the Executive to:

- a) approve Options one and two for the northern section of Bearwood Road as detailed in paragraphs 1.15 – 1.17 in principle, subject to funding; and
- b) approve Options one and two for the central section of Bearwood Road , as detailed in paragraphs 1.24 and 1.25; and
- c) approve Options one, two and three for the southern section of Bearwood Road, as detailed in paragraphs 1.32, 1.33 and 1.34; and
- d) authorise the advertisement and formal consultation of the Traffic Regulation Order detailed in paragraph 1.34 and consider any objections which may be received and if no objections are received, to authorise the introduction of the Order.

3 FINANCIAL IMPLICATIONS

3.01	NORTHERN SECTION	OPTION ONE	£3,500
		OPTION TWO	£15,500
		OPTION THREE	£16,000
		Total of options one and two	£19,000

As stated in paragraph 1.19, it is recommended that Options one and two be approved in principle, and that no works be undertaken at the current time.

CENTRAL SECTION	OPTION ONE	£3,000
	OPTION TWO	£1,000
	Total of options one and two	£4,000

SOUTHERN SECTION	OPTION ONE	£700
	OPTION TWO	£200
	OPTION THREE	£7,000
	OPTION FOUR	£8,500
	Total of options one, two and three	£7,900

Therefore total cost of works for the central and southern sections is £11,900.

3.02 There is no funding currently identified for these works, however, they could be funded from the 2003 – 2004 capital minor works budget if funds permit.

3.03 All of the above costs are subject to statutory undertakers plan and detailed design.

Plans available in hard copy

TITLE: SPEED INDICATION DEVICE

REPORT PREPARED FOR: HIGHWAYS BOARD – 15th JULY 2003

REPORT PREPARED BY: KATE FULLER-WOKINGHAM DISTRICT
COUNCIL/PARKMAN

SUMMARY:

To inform the Highways Board of progress on Wokingham District Council's Speed Indication Device project.

ALTERNATIVE OPTIONS, IF ANY:

None

RECOMMENDATION:

To further raise the profile of Wokingham District Council's Speed Indication Device through publicity and input from Local Members, Parish Councils and members of the public.

Background Papers

Held by: Kate Fuller, Team Leader-Traffic Management
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Dept: Environmental Services
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NB: All reports seek to identify environmental, community safety and equal opportunities implications. Consultation with residents and organisations which has or is about to take place, will also be reported.

1 BACKGROUND

- 1.01 Speed is recognised as a contributory factor in approximately one third of all road accidents and results in over 1000 deaths on the UK's roads. These figures include not only vehicles travelling above the posted speed limit, but also vehicles travelling within the posted speed limit but at a speed inappropriate for the prevailing conditions.
- 1.02 During the last three years there have been approximately 206 accidents of varying severity recorded as having inappropriate speed as a contributory factor on Wokingham's roads which resulted in approximately 302 casualties.
- 1.03 Reducing vehicles speeds is considered to have a direct influence, not only on the number of personal injury accidents, but also on the severity of the injuries sustained. Research has shown that a 1mph reduction in the average speed of vehicles could reduce the accident rate by as much as 5%.
- 1.04 In May 2002 Wokingham District Council purchased a mobile Speed Indication Device (SID) from funds generated from speed camera fines. These funds are managed by the Thames Valley Safer Roads Partnership (netting off).
- 1.05 SID is a trailer mounted device which, when positioned at the side of the road, detects the speed of approaching vehicles and displays the speed on a highly visible illuminated display screen. It is considered that, by clearly displaying the speed of vehicles exceeding the speed limit, the drivers can be educated and encouraged to slow down.
- 1.06 To date the device has been used effectively to raise awareness throughout the District at numerous sites and recently a dedicated part time operator has been employed to expand the current programme of sites visited. Currently there is sufficient funding allocated through the Thames Valley Safer Roads Partnership to allow the operator to work on the project for up to two days per week.
- 1.07 **Site Allocation**
Sites for the use of the device can be identified in a number of ways and to date requests for visits with SID have come from Local Members, Parish Councils, Thames Valley Police and members of the public. Each request is investigated to determine the suitability of the location to use the equipment and if appropriate the site is accorded a priority ranking.
- 1.08 Prioritisation of the sites is essential to ensure that the device is being used where vehicles travelling in excess of the speed limit are likely to be causing the greatest hazard to pedestrians and other road users.
- 1.09 While being very manoeuvrable, given the size of the equipment, there are limitations to where it can be safely used. During an appraisal of the site, prior to visiting with the device, careful consideration is given to the positioning of the equipment to ensure it does not cause an obstruction or distraction to motorists or other road users which would have a detrimental effect on road safety.
- 1.10 Sites where it is believed that using SID can have the maximum effect are built up areas that are subject to a speed limit of 20mph, 30mph or 40mph. It is unlikely that

sites subject to a higher speed limit would be appropriate for the use of the equipment.

- 1.11 When determining the priority ranking of a proposed site there are a number of factors that will influence ranking. The primary factors being, previous accident history, the volume of traffic, the number of pedestrian or cycle movements and the proximity of schools and community facilities, although there will be other determining factors and each site should be assessed on its own merits.
- 1.12 The time of the day that the equipment is used is also an important consideration as usually there is a particular time of the day that traffic volumes or vehicle speeds are at their highest and targeting these times will ensure that maximum benefits can be gained.
- 1.13 **Speed Monitoring**
The speed is recorded by the operator as vehicles pass the device and their speed is displayed. This can either be just the speeds in excess of the speed limit or the speed of each vehicle passing the device, depending on the nature of the site and volumes of traffic. Recording the speed of each vehicle passing enables the 85th percentile speed to be calculated.
- 1.14 The extent of the speeding problem can be established using the data collected during the survey. This could identify that there is not a significant number of vehicles speeding and reassure the complainant that the issue is one of perception of speed, or that there are a significant number of speeding vehicles and the issue justifies further action.
- 1.15 **Thames Valley Police**
Working in partnership with Thames Valley Police's Casualty Reduction Officer, in certain circumstances where a problem with speed has been identified it may be appropriate to carry out enforcement action subject to certain criteria.
- 1.16 Thames Valley Police have identified certain routes under their jurisdiction as Injury Collision Routes and the A329 forms one of these routes within Wokingham District. Police enforcement priorities are directed toward this route, however, there is scope for enforcement support on other routes subject to there having been personal injury accidents recorded at the site.
- 1.17 On such occasions a police officer is able to revisit the site with road safety officers and stop vehicles travelling above the posted speed limit. The police direct the speeding motorists to the road safety officers, where they are advised of the dangers to themselves and other when breaking the speed limit.
- 1.18 In circumstances where a significant number of speeding vehicles are identified by the speed indication equipment, but the site does not meet the criteria for police enforcement support, the site can be programmed for routine visits to raise driver awareness to the speeds that they are travelling.
- 1.19 **Public Relations**
In order to further develop the programme of sites visited by SID, a publicity leaflet has been produced which is currently at print and will be distributed in due course. The leaflet aims to raise the profile of SID and invite members of the public, Local

Members and Parish Councils to assist in the identification of sites where they believe speeding motorists are causing a hazard.

2 OPTIONS OR RECOMMENDED ACTION

- 2.01 By raising the profile of SID and encouraging input from others it is believed that significant benefits can be gained in the education of drivers throughout the District while reinforcing Wokingham District Council's commitment to raising awareness to the dangers of speeding.

3 FINANCIAL IMPLICATIONS

- 3.01 Funding for the operator of the Speed Indication Device is through the Thames Valley Safer Roads Partnership and an allocation of £10,000 has been made available for the 2003/04 financial year.