

The accident plots for a five year period from 2000 to 2005 shown above. The accident patterns show few if any clusters. As would be expected the majority of accidents take place at junctions.

The nearest to a consistent accident cluster occurs at Ash Tree Corner at the junction of Chelmsford Road with the B1008 where there are three accidents, one of them serious, involving vehicles emerging from Chelmsford Road into the B1008. The serious accident involved a cyclist.

Three accidents also occurred at the junction of Court Road with Broomfield Road one involving a cyclist but there was no consistent pattern to these incidents. Similarly at the junction of Corporation Road with Broomfield Road there were also three accidents, one involving a cyclist who was hit by a branch from a falling tree. The other accidents again showed no consistent patterns.

Although 38 accidents were recorded in total they are generally dispersed and no single location therefore qualifies as an accident black site or remedial location.

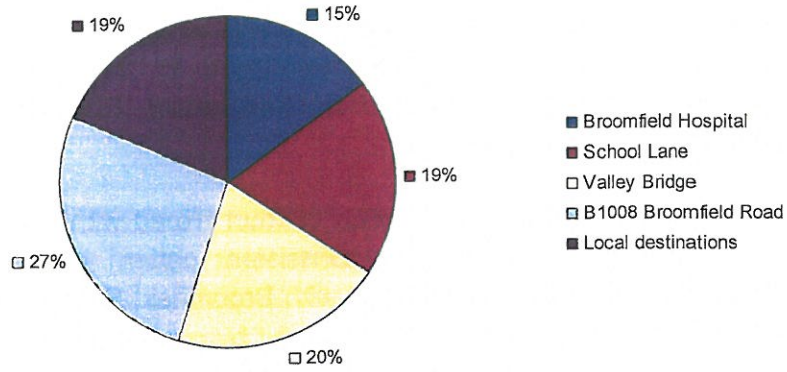
## **2.7 The B1008 Broomfield Road Corridor – Movement patterns**

In order to derive movement patterns a series of traffic surveys were carried out on the 15<sup>th</sup> March 2006. These surveys involved creating a cordon at the key entry and exit points to the B1008 Broomfield Road corridor as follows:

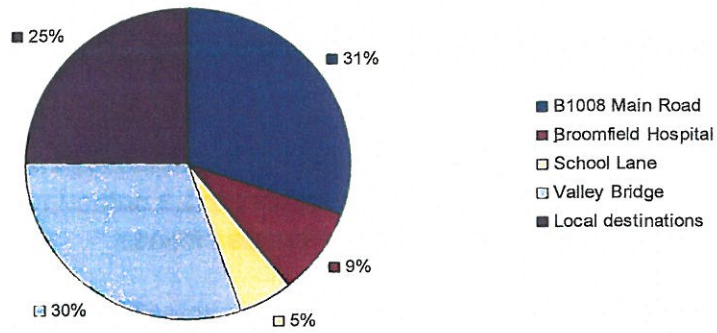
- B1008 Braintree Road to the south of Sheepcotes Roundabout
- Valley Bridge
- B1008 Broomfield Road to the north of the junction with Parkway
- School Lane
- Hospital Approach

The surveys were undertaken by sampling vehicles which were identified from their registration plates and traced through from entry to exit. Through vehicles were separated from stopping vehicles on the basis of time differences between entry and exit with a 15min threshold. The results of these surveys are shown below as pie charts for the evening peak period and fuller plots are included as Appendix 1.

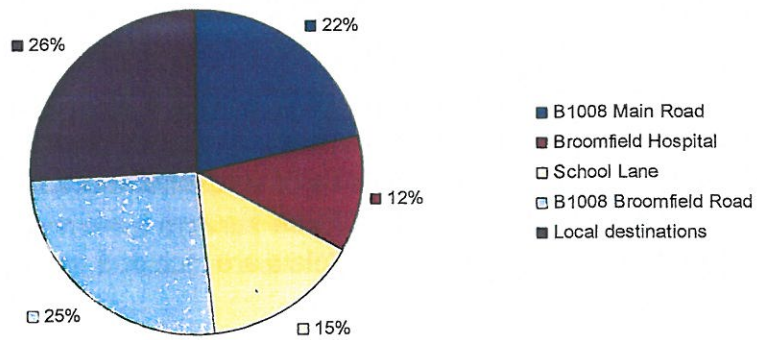
**B1008 Main Road trip destinations**



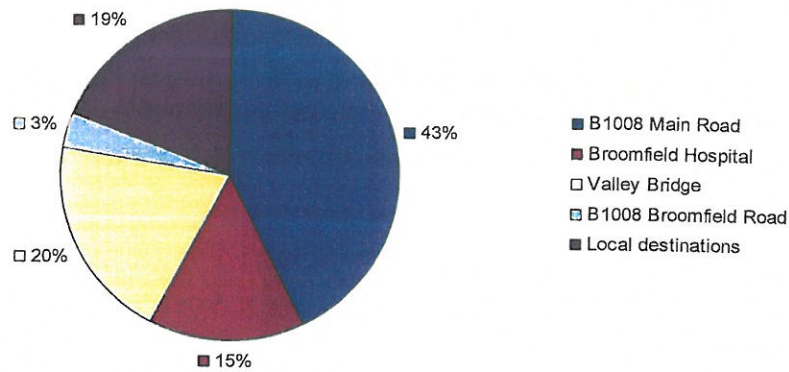
**B1008 Broomfield Road trip destinations**



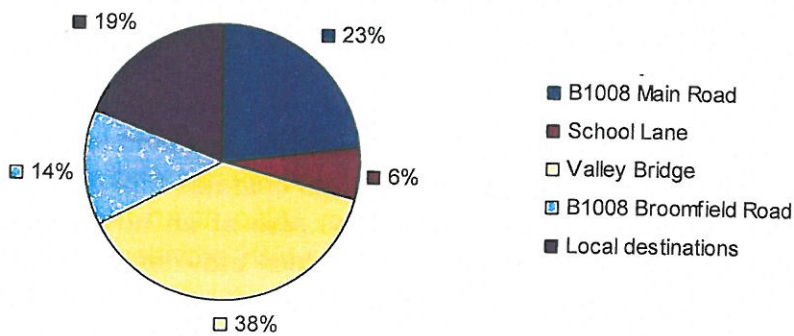
**Valley Bridge trip destinations**



School Lane trip destinations



Broomfield Hospital trip destinations



In general, local traffic accounts for slightly more than 20% of the traffic entering and leaving the corridor the remainder being through traffic. Through traffic movements along the B1008 Broomfield Road account for approximately 30% of trip movements entering at either end of the B1008. Broomfield Hospital accounts 9% of Broomfield Road traffic from the south and 15% from the north.

Through traffic using School Lane from areas to the west primarily exits via the B1008 at the north indicating a strong demand in the north-west axis. Of the School Lane traffic 20% leaves via Valley Bridge indicating a strong demand in the east-west axis which uses the middle section of Broomfield Road to complete this movement. In the reverse direction traffic between Valley Bridge and School Lane comprises 15% of the total flows on Valley Bridge. Of the other destinations, 22%



exit via the B1008 Main Road to the north and 25% via Broomfield Road to the south. This is indicative of traffic route switching between the A130 and the B1008 perhaps using sections of each route for parts of the journey and then switching to avoid localised congestion.

For traffic leaving Broomfield Hospital the majority (38%) leaves via Valley Bridge. Of the remainder 23% exits via the B1008 Main Road northbound and 14% the B1008 Broomfield Road southbound. Local destinations within the corridor account for 20% of the Hospital traffic.

## 2.8 Public Transport

The main services serving the B1008 corridor are the 42 and the 47, both of which terminate at the hospital. Both services are operated by First Group and are branded as Overground services providing a 15 min frequency for the 42 and a 30 min frequency for the 47, using modern low floor buses. The 47 is a cross-town service between Chelmer Village and Broomfield Hospital via the town centre and North Melbourne. The 42 is also a cross-town service Galleywood and Broomfield Hospital via the town centre but it serves the hospital more directly along the B1008 Broomfield Road corridor.

Other services which serve the B1008 Broomfield Road and the hospital directly are less frequent. The 352 is also operated by First and operates between Halstead and Chelmsford town centre at an hourly frequency. Also at an hourly interval is the Stansted Connection, operated again by First, which provides a service between Chelmsford and Stansted Airport, via Broomfield Hospital. Two Village Link services, operated by Heddingham Omnibuses also serve the Hospital. The 16 links Wethersfield and Chelmsford town centre via Broomfield Hospital. It operates four times per day in each direction. The 344 between Black Notley and Chelmsford, via Broomfield Hospital operates only on Fridays and only once in each direction.

Indirect services are provided involving a change of route at Chelmsford Bus Station although such changes of service can be a deterrent to bus usage.

Rail services serve Chelmsford Station which is located adjacent to the Bus Station. Hence journeys to the B1008 Broomfield corridor by rail can be completed fairly conveniently with only a single transfer from rail to bus.

The question of public transport accessibility to Broomfield Hospital is dealt with at some length in Chapter 7

## 2.9 Walking & Cycling

From Chelmsford Road on Little Waltham Bypass southwards all the way to the bottom, The B1008 has footways to either side of the road. There are also a total 4 pedestrian priority crossing facilities in the form of Pelican or Zebra Crossings. Pedestrian crossing facilities for Broomfield Road also exist at the traffic signals at Corporation Road and Patching Hall Lane.

Despite these crossing facilities it may be considered that the B1008 Broomfield Road is a cause of severance to the communities which front it. In the Parish Survey (detailed in the next section) there were suggestions of converting the existing Zebra Crossings to Pelicans and also for an additional crossing facility north of Broomfield close to Hospital Approach.

Severance is undoubtedly related to traffic volumes and the key to preventing increasing impact on the communities fronting the road and reliant upon it for local services will be to prevent traffic volumes increasing wherever possible.

Cyclist are provided with on-street cycle lanes along the length of Broomfield Road from the Valley Bridge southwards all the way down to the southern end at the junction with Parkway. While these afford some priority to cyclists they are subject to blocking by illegal parking etc and guarantee only a minimal amount of protection to cyclists who remain within the general traffic mix.

A preferable route for cyclists is the Riverside Cycle Route which runs from Greenways just south of Valley Bridge on the western side of the River Chelmer all the way down to the APU Campus, thus providing a link through to Chelmsford town centre. This offers a safer and pleasant alternative route for cyclists. There has been pressure to extend this route northwards along the riverbank beyond Valley Bridge towards Broomfield Hospital. Unfortunately no public right of way exists along this stretch of the river and hence the extension would be dependent upon negotiation of rights of way or the purchase of land. There is little prospect of any such proposals being brought forward in the near future.

## 2.10 Traffic Management

At the current time there are no firm proposals for traffic management improvements along the corridor other than minor kerbing changes and refurbishment of the traffic signals at the Corporation Road junction and at the Valley Bridge junction.

The only other changes in layout proposed are as a result of the proposals for expansion of Broomfield Hospital which will involve minor carriageway widening and

junction layout improvements at the mini roundabout at the Hospital Approach junction and at Sheepcotes Roundabout.



## 3 Local Concerns & Views

### 3.1 Overview

The need for this study has been largely dictated by a number of local concerns concerning a variety of planning and infrastructure issues which will impact in various ways on the B1008 corridor. These include:

- A potential Park and Ride site for north Chelmsford
- Proposals for a Chelmsford North East Bypass
- Associated with the North East Bypass proposals for a Cross Valley Link to Broomfield Hospital
- Broomfield Hospital Studies (for development control purposes)
- Beaulieu to Chelmsford Rapid Transit Study (BART)
- Chelmsford Urban Area – (Cycle schemes, traffic management schemes)
- Proposals for demand responsive transport solution using taxi buses

All of the above could impact upon the B1008 Broomfield Road corridor and have a significant effect upon those who live and work within its vicinity.

### 3.2 The Broomfield Parish Plan

A significant proportion of the length of the B1008 Broomfield Road corridor lies within the historic parish of Broomfield. With roots back to pre-Roman times the history of Broomfield can be traced back to three separate Saxon Manors which formed the nucleus of what became known as the village of Broomfield. The growth has been most dramatic in the 20<sup>th</sup> century when the population quadrupled from 900 to 3900. Current development is focused around Church Green which is considered to be the focal point of the village.

In 2005 The Broomfield Parish Council produced its excellent and well researched Parish Plan which ranged across a range of social and planning issues including a Parish Survey of both the local residents and local employers.

On a number of issues the responses of residents and employers, not unexpectedly tended to differ. In general the businesses within the corridor tended to favour development in general and also the expansion of Broomfield Hospital.

Traffic and its associated problems was considered to be the least attractive aspect of village life with a total of 94% considering traffic too heavy at peak times and 58% considering it too heavy at all times. There was a general belief that lower bus fares and more cycleways would help to change behaviour. In particular a desire was identified for a cycleway between Goulton Road into Chelmer Valley High School. There was also a suggestion to extend the existing cycleway along the river northwards from its existing termination at Valley Bridge northwards to Mill Lane and then eventually onwards to Broomfield Hospital.

There was a general feeling that traffic speeds were too high but there was also considerable opposition to the use of speed cameras and conventional traffic calming measures such as humps and chicanes. There was general support for gateway features and other measures to reduce traffic speeds and manage traffic, such as vehicle activated speed warning signs. Mini roundabouts were suggested at the junctions of Main Road with both School Lane and Erick Avenue. These were intended both to slow the main road traffic and also as a means of affording higher priority to side road traffic.

The difficulty of crossing Broomfield Road and Main Road was identified as a problem with a suggestion that the existing zebra crossings at the Angel and Days Garage be converted to Pelican Crossings. There was also a suggestion of a new crossing to the north near to the hospital access between Butlers Close and Court Road.

Parking was also an issue that raised considerable comment. Parking for the existing businesses was identified as a problem although it was also acknowledged that it had a calming effect on traffic behaviour too. Parking lay-bys in front of shops were suggested as a potential solution. Stricter parking restrictions were also favoured by 40% of respondents. Suggestions were also made for an additional new car park at the church and better use of existing parking facilities was also suggested with the community centre car park being made available for use parents of children at Broomfield Primary School.

At a more strategic level there was considerable support for new roads directly serving Broomfield Hospital and bypassing parts of the B1008 Broomfield Road either from the north or south. Acknowledging that the more likely form of relief would come from subsequent proposals for a North Eastern Bypass of Chelmsford as identified in the LOIS Study, there was strong support for the so called cross valley route which would link the Broomfield Hospital and the B1008 with the new Bypass via a new road crossing the Chelmer Valley from east to west.

### **3.3 Comments of Little Waltham Parish Council**

The main concerns of the Parish Council relate to the proposals for a new North Eastern Bypass of Chelmsford which they feel should link the A130 at Gt Leighs with



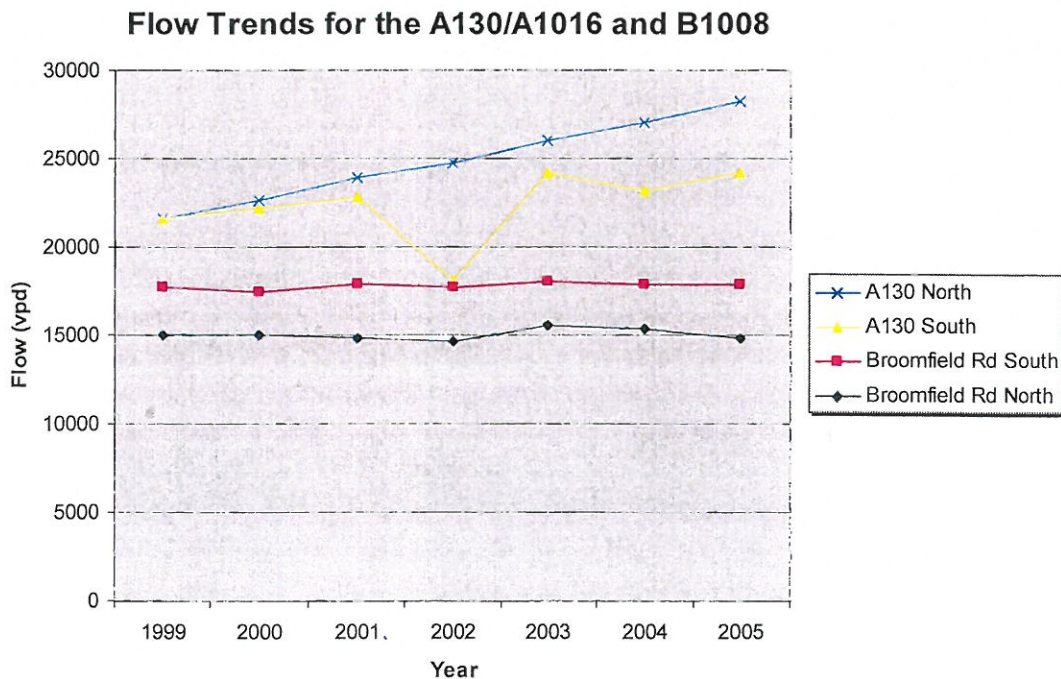
the Boreham Interchange on a complete new alignment rather dualling any of the existing alignment. They are though opposed to the part of such a scheme known as the Cross Valley Route, which they feel would spoil the river valley, even though they are concerned about the current amount of traffic running through the village to access the Broomfield Hospital. They feel that access to the Hospital would be better served by a new northern corridor to the west of the B1008 Broomfield Road.

## 4 The B1008 and A130 Corridors

### 4.1 The B1008 Broomfield Road Corridor – Usage & Flow Conditions

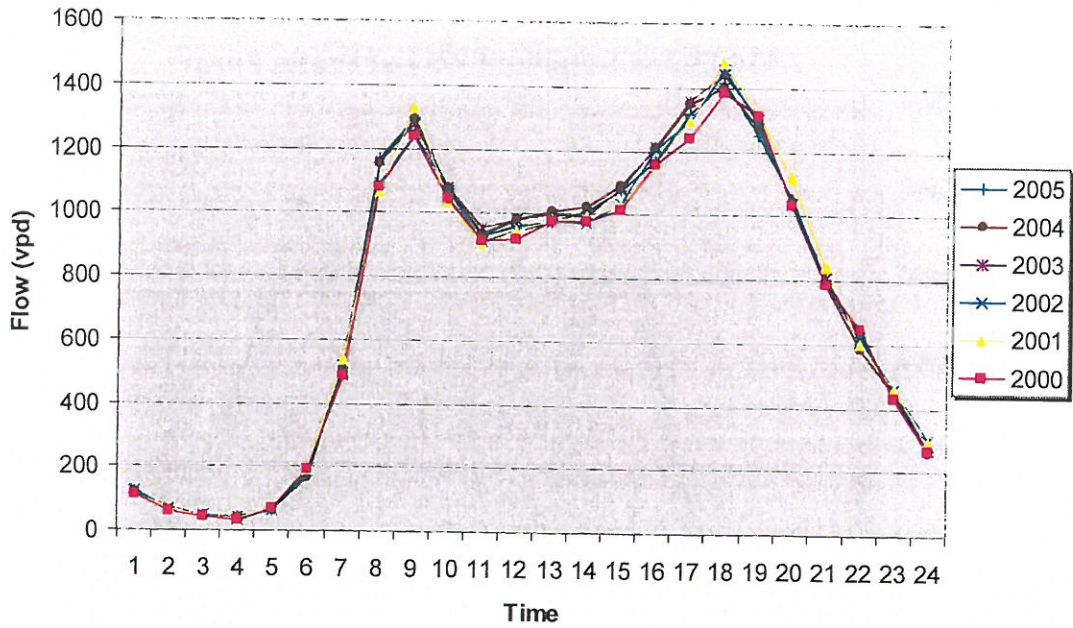
In effect the A130/A1016 Chelmer Valley Road and B1008 Broomfield Road provide alternative routes into Chelmsford town centre from the north. The A130/A1016 is the preferred and signed route for through traffic and a review of the flow levels shows that the A130/A1016 is the busier of the two routes carrying approx 24,000 vpd at its northern end and 28,000 vpd at its southern end. In contrast the B1008 Broomfield Road carries 15,000 vpd at its northern end and 18,000 vpd at its southern end.

However a look at the historic flows and daily flow profiles shows quite interesting contrast in traffic behaviour. Along the B1008 Broomfield Road there is no evidence from long term traffic monitoring over the last six years of any traffic growth at either the northern or southern end of the road in terms of overall daily traffic flow levels. In contrast the flows on the A130/A1016 Chelmer Valley Road, aside from those recorded at the northern end in 2002 which are considered anomalous, demonstrate a fairly consistent pattern of growth amounting to approx. 5% pa at the northern end and 2% pa at the southern end. This is a rate of growth in excess of the national rate of traffic growth.



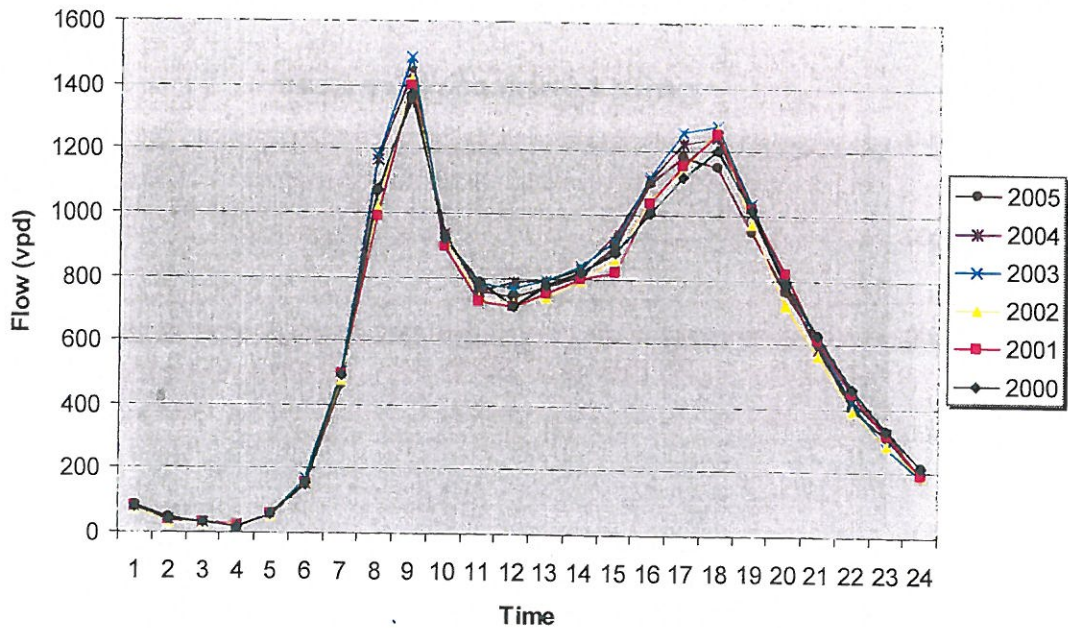
More interesting perhaps, is the way that traffic flows have changed throughout a typical day.

### B1008 Broomfield Road near Fourth Avenue



The flow profile throughout the day is pretty constant on the B1008 at both the top and bottom ends.

### B1008 Main Road at Ash Tree Corner

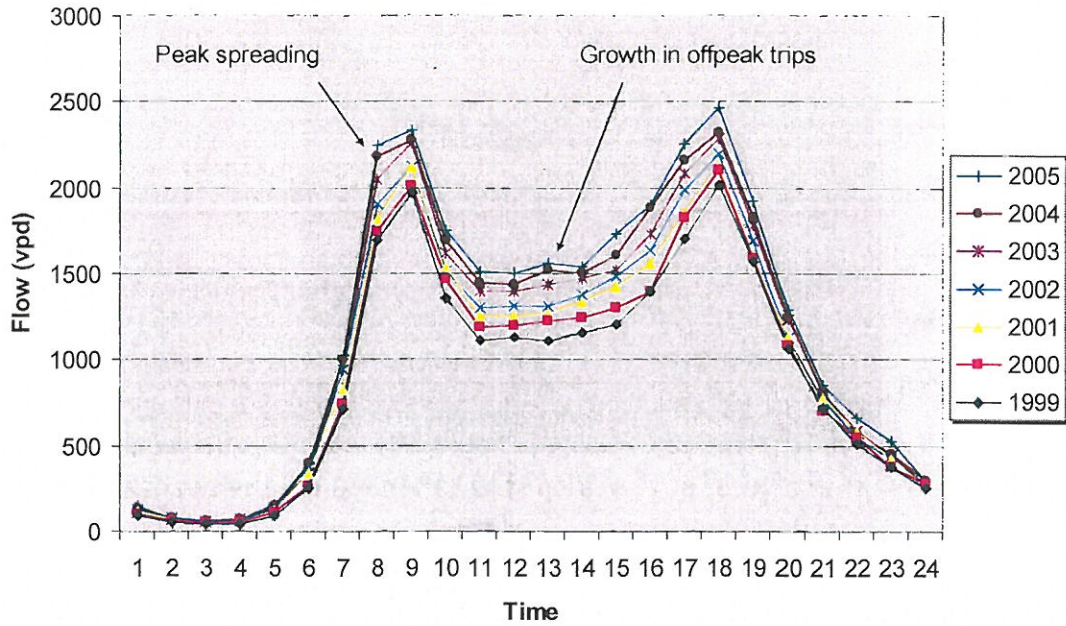


However, along the A130/A1016 there are signs that the growth in traffic is being achieved unevenly throughout the day. At the northern end there is some evidence of peak spreading with journeys perhaps commencing earlier in the morning peak



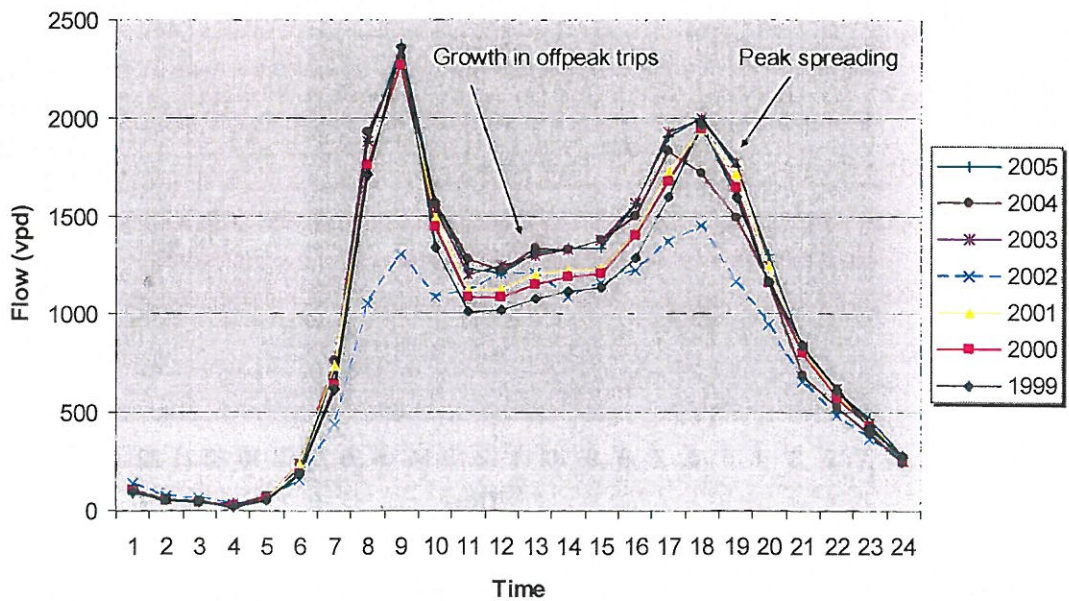
and higher growth in the off-peak period than the morning and evening peaks.

### A130 Essex Regiment Way at Pratts Farm



At its southern end there is more pronounced peak spreading in the evening peak period and little evidence of growth in the morning peak. Again the growth in off-peak trips is higher than during the normal peak periods.

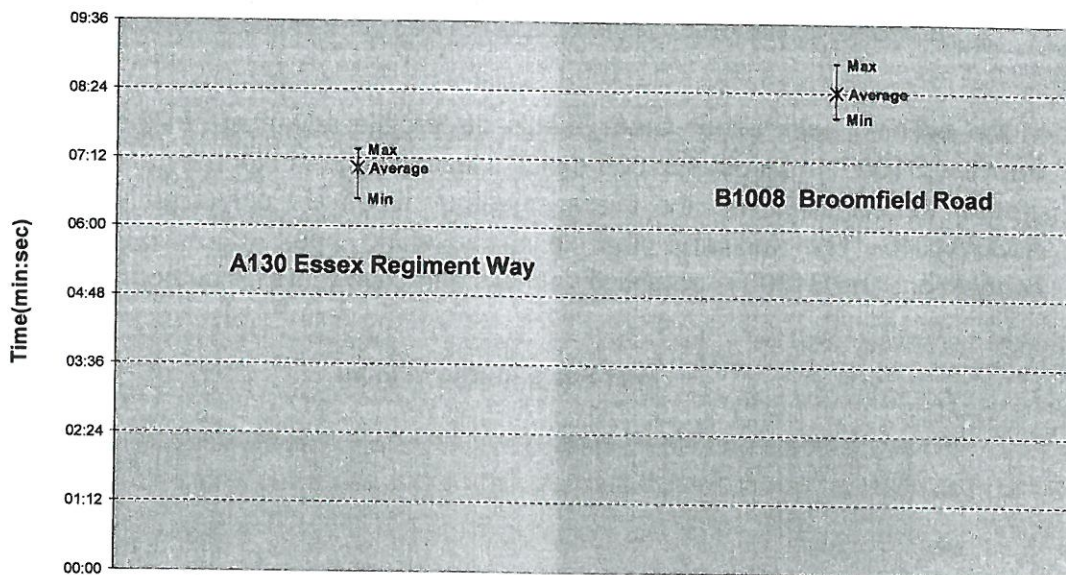
### A1016 Chelmer Valley Road



This pattern of traffic growth along the A130/A1016 is fairly typical of radial and main urban roads under pressure of traffic growth and has been observed at other locations throughout the County. Typically off-peak growth is observed to increase rapidly accompanied by peak spreading giving a much flattened profile through out the day. This is assumed to be evidence of motorists adjusting their behaviour in response to peak hour congestion and optimising their travel patterns.

Such optimisation of journeys can lead to route switching and it is therefore informative to look at the B1008 Broomfield Road and A130/A1016 as alternative routes. Although it is slightly longer at 4.5 miles, compared with 4.2 miles via B1008 Broomfield Road, the A130/A1016 provides a journey time advantage of more than a minute, for the end to end travel time of approximately 7 minutes, in freeflow (off-peak) conditions.

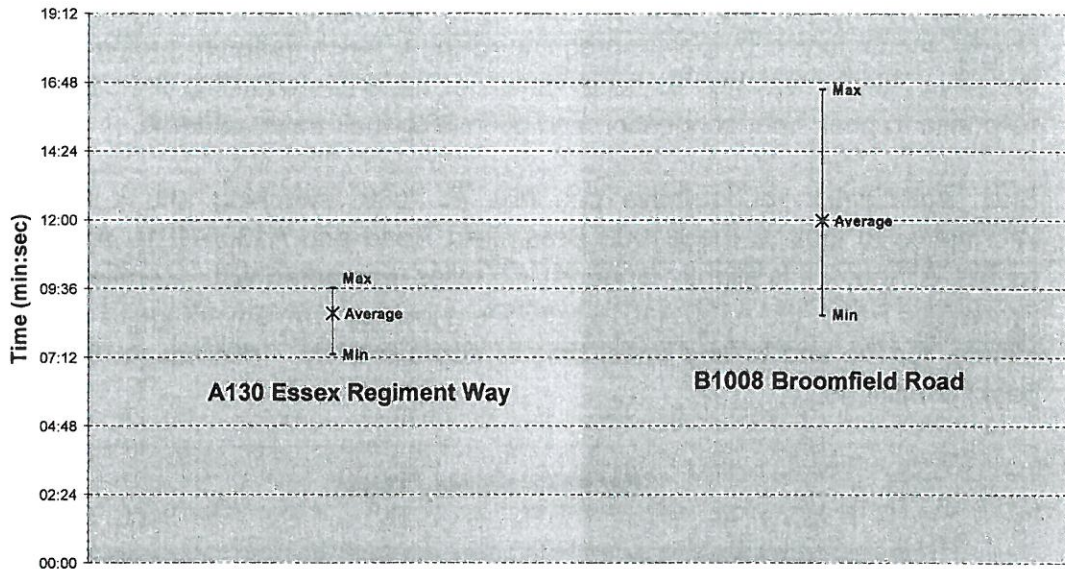
### Off Peak Journey Times



The main difference in journey time is due to the higher speeds attainable on the A130/A1016 Chelmer Valley Road where no speed limits exist. However when traffic volumes build up and speeds decrease then the natural advantage of the A130/A1016 over the B1008 diminishes. Although the average journey time is still at least one minute quicker on the A130/A1016 there are some times during the morning peak period when the journey via the B1008 is quicker. There is an advantage that for the A130/A1016 in that the variations in journey time are much less and therefore trip reliability is greater. However the advantages appear to be diminishing as congestion increases.

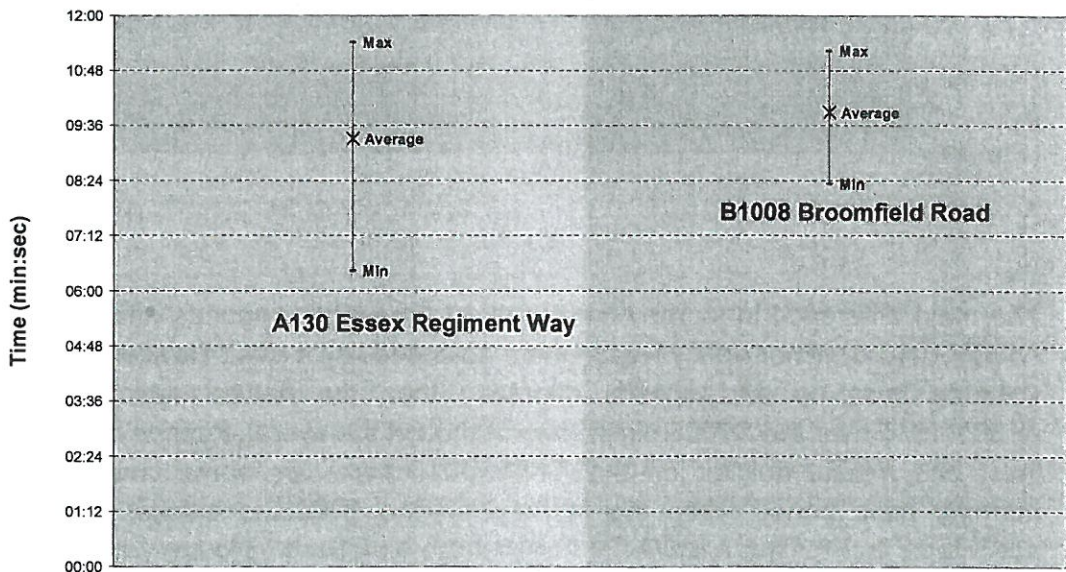


### AM Peak Journey Times



In the evening peak period there is little discernible advantage in the A130/A1016 over the B1008. In fact the B1008 exhibits less variation in journey and hence gives greater trip reliability and the average journey times are only slightly greater than A130/A1016. This indicates that in the evening peak, due to the effects of congestion, the B1008 is potentially a more attractive route for outbound traffic

### PM Peak Journey Times





## 5 Schools

### 5.1 Introduction

The area served by the B1008 corridor is host to 6 primary and secondary schools with catchment areas that vary from the very local to County-wide.

Broomfield Primary is located at School Lane in Broomfield, around 200m to the west of the B1008 and while the Kings Road Primary School lies some quarter of a mile or so to the west of the B1008, its catchment area extends east of the corridor, requiring pupils to cross the main road.

Four out of the 11 secondary schools in Chelmsford lie within the vicinity of the B1008 corridor; they are St John Payne RC School, Chelmer Valley High School, Chelmsford County High School for Girls, King Edward Grammar School for Boys. The Chelmer Valley High School has the most local catchment although it does extend significantly beyond the B1008 corridor into much of north Chelmsford. The other secondary schools all draw from a much wider area.

### 5.2 Broomfield Primary School

Located in School Lane Broomfield, this is a local primary school serving Broomfield village. It has 312 pupils on the roll who come from within a local catchment. The school has a Travel Plan and currently operates a single walking bus which picks up pupils from the north, coming down from the Hospital area. Another walking bus is planned to be implemented. Unfortunately, for pupils arriving from the east of the B1008 there is currently no crossing patrol of this road.

In common with virtually all schools, problems are experienced due to the traditional school run by car. A recent travel survey showed only 51% of pupils walking to school on a regular basis and 44% arriving at school by car. Overall 15% park in the Community Centre car park located on the east side of Broomfield Road and walk the last part of the journey to school, a walk of approximately 5 mins. The remaining 29% of pupils arriving at the school gate lead to significant parking problems in the narrow School Lane at the beginning and end of the school day, problems which can also overspill into the car park of the Angel Public House. Problems are also exacerbated by the shop on the corner of School Lane with Main Road which is heavily used by car drivers throughout the day resulting in congestion and obscured views.

### 5.3 Kings Road Primary School

Located in Kings Road, off Corporation Road, this primary school has 365 pupils on the roll. The catchment extends over a significant area, mainly to the west of the B1008. However approximately 10% of the pupils attending do come from the areas to the east of Broomfield Road and have to cross at the zebra crossing at the Broomfield Road/Kings Road crossing.

A recent travel survey showed 61% of pupils arriving at school on foot and accompanied by an adult but 24% being driven to school. There was though an indication that some parents may consider car sharing if suitable arrangements could be made. The lack of safe crossing points was identified as one of the major deterrents to allowing children to walk to school and the crossing of Broomfield Road was the most cited area of concern.

### 5.4 Chelmer Valley High School

This is a medium sized secondary school with 1065 pupils on the school roll. It is located on Court Road just to the south of Broomfield Hospital. The catchment extends over a significant part of north Chelmsford and includes the following feeder schools:

- Broomfield Primary
- Newlands Spring Primary
- Melbourne Park Primary
- Gt Waltham Church of England Primary
- Little Waltham Church of England Primary
- Boreham Primary
- Gt Leighs Primary

Although 6 to 8 coaches deliver pupils from Boreham, Hatfield Peveral, Braintree, High Easter and Ford End there are still a considerable number of trips associated with the 'school run' which result in parking on the streets in the vicinity of the school entrance.

## 5.5 St John Payne RC School

This Catholic School draws its 1143 pupils from a very large catchment area. It is situated in Patching Hall Lane approximately 400m to the west of the B1008 Broomfield Road. Around 400 pupils are drawn from within Chelmsford and the balance of 700 pupils are drawn all over the County. Typically 13 large buses and assorted mini-buses and taxis are used to ferry pupils to school on a daily basis.

There are also significant numbers of private vehicle trips associated with the 'school run'

## 5.6 Chelmsford County High School for Girls

This is a selective school with 864 pupils drawn mainly from mid-Essex but also significant numbers from the south of the County and beyond. It is located fronting Broomfield Road on its western side just to the north of Elms Drive and adjacent to the traffic signal controlled junction with Corporation Road.

Dedicated bus services involving five vehicles are provided in consortium to jointly service the school and the nearby King Edward Grammar School for Boys but pupils are also brought by taxi and private car. However the good public transport service and good bus connectivity to Chelmsford Rail Station do lend the school a high level of accessibility by public transport.

Currently 51% of pupils arrive by bus and 20% by train. Only 5% by walk and 1% cycle which is perhaps not unexpected considering the wide catchment area. The private car accounts for 23 % of trips and the school is taking measures to control and discourage such trips. Parents are not allowed to pick up and drop off immediately outside the school and are encouraged to use the nearby Rectory Lane car park. An additional pedestrian entrance is also being created to ease the pressure on the current ones.

## 5.7 King Edward Grammar School for Boys

A selective school for boys with 860 pupils it is located on the western side of Broomfield Road at its bottom end fronting the Parkway/Rectory Lane gyratory system. Its catchment is similar to the High School for Girls covering mainly mid-Essex but also drawing some pupils from the north and south of the County and even some beyond the County boundary..



School bus services are shared on a consortium basis with the High School for Girls and the public transport accessibility is similarly high. In fact bus is the most popular mode of travel to the school with 39% arriving in this way. Nevertheless a lot of pupil trips by car and taxi are still generated with 28.5% of the total arriving by car and these need to set down within the congested gyratory system of Rainsford Road/Parkway/Broomfield Road. The wider catchment is reflected in the 23.5% of pupils who arrive by train, completing their journey from Chelmsford Station either by bus or on foot.

The school has recently carried out a series of measures to improve the quality and safety of access to the school. Including increasing the number of bus stands, re-locating a bus shelter, alteration of pedestrian barriers and increasing and improving the points of pedestrian access to the school grounds. All these measures have helped to achieve a swing in favour of sustainable transport modes between the surveys carried out in 2003 and 2005.