

# Evaluation of First Yellow Bus Pilot Schemes - Summary

## Background

Recent years have seen increasing concern about the rising proportion of pupils transported to school by car and the associated traffic congestion, environmental and social/health problems. As a result, there has been growing interest in the use of American style yellow bus schemes in the UK in recent years. Initially, several local education authorities including West Sussex, Staffordshire and Cheshire introduced American style school buses to provide a cost effective alternative to existing school transport contracts. More recently, other local authorities/local education authorities/PTEs adopted an initiative from *First*, introducing a package of measures with an American school bus to improve the image and quality, of school transport, or to encourage a transfer from car to bus.

Three pilot schemes were introduced by operator *First* Group in: Hebden Bridge (West Yorkshire), Runnymede (Surrey) and Wrexham (North Wales); followed by schemes in Wokingham, Aberdeen and Windsor & Maidenhead introduced in 2003. In addition, several other authorities have recently introduced yellow bus schemes, which incorporate some of the pilot area schemes' features but use different vehicle types.

## Objectives

The objectives of this research were identified by the DfT as:

- to assess how successful the *First* yellow school bus pilots have been at reducing the number of journeys to school by car;
- to gauge the attitude of parents and pupils to the features of the scheme and design of the vehicles;
- to compare the safety record of the *First* pilot vehicles with that of vehicles traditionally used for school bus services;
- to assess the accessibility of the *First* pilot vehicles;
- to compare the daily cost per capita to local education authorities and local authorities of running a *First* pilot vehicle to that of running a traditional school contract vehicle; and
- to assess whether yellow bus schemes have any impact on unauthorised absences (this objective was not part of the original specification for this project, but was added at interim report 1 stage).

The specific objectives within these are included in Appendix A of the report.

## Methodology for the project

The project has involved a twelve-month evaluation of the three *First* yellow school bus pilots in Hebden Bridge, Runnymede and Wrexham. This evaluation of the three initial pilots included:

- surveys of parents and pupils/students in participating schools in September 2002;
- consultation with stakeholders including local authorities, operators, driver trainers, drivers in Hebden Bridge and Wrexham;
- focus groups in each area with parents, students - users and non users, and local residents;
- an assessment of the accessibility, financial and safety issues during 2003; and
- follow up surveys in May 2003 with parents and pupils/students.

In addition, during the project DfT requested that the evaluation be extended to include:

- other innovative yellow school bus schemes that include some attributes over and above those usually found on school transport introduced in Harrogate, Ilkley, Norfolk and Greater Manchester (Wigan and Stockport). Here the evaluation included review of available data, consultation and also focus groups with users/non users, but not additional survey work; and
- review of the more recently introduced additional schemes operated by *First* in Wokingham, Windsor & Maidenhead and Aberdeen; as well as
- the longstanding operation of American manufactured Blue Bird buses in West Sussex, Cheshire and Staffordshire.

In addition, benchmarking of the authority areas was undertaken, to provide context in terms of education provision, socio economic, demographic and transport factors.

## **The schemes**

A summary of the schemes is included in Appendix E of the report.

## **Initial reactions to the yellow bus schemes**

Initial reactions to the yellow bus schemes in all the areas were broadly positive from students, schools and parents. The commitment to improve quality was appreciated and the introduction of the schemes seen as being a very visible commitment by the local authority. Initial concerns largely related to operational issues such as timings of services. Overall, awareness of the schemes was high at all the schools in the three pilot areas, with few parents/pupils unaware that yellow buses were serving their school.

## **Yellow bus scheme attributes**

The service attributes of the yellow bus schemes liked by most parents and students were:

- A pick up close to home and drop off close to school - this was the most highly ranked attribute of the schemes by parents and students in the survey responses, but for differing reasons - for students this seemed to be motivated by convenience, and for parents by personal and road safety concerns
- The fact the yellow school buses are not available to the general-public was liked for security reasons by parents, but for secondary age students was seen as beneficial by reducing the friction between school users and other bus users
- A driver regularly allocated to the specific route, with additional training who could get to know the pupils, schools and parents was a key factor for the schools and for primary pupils' parents
- A guaranteed seat for each child was seen as a key attribute, as was the fact that standees were no longer permitted on these school routes. (However, there was mixed response to pupils being allocated a specific seat - this was preferred if seating allocations were agreed by students themselves, rather than allocated by the school)
- CCTV equipped vehicles were welcomed by operators (to reduce malicious allegations as well as vandalism), by schools and pupils to maintain discipline and reduce bullying.

Overall, the colour of the vehicles was not a highly ranked attribute of the scheme by parents or students in the surveys in Hebden Bridge, Runnymede and Wrexham. Consultation in these areas, as well as Harrogate, Norfolk, and Ilkley, revealed a more complex view, with secondary aged students least keen on the colour - it made the vehicles 'stand out'. However, residents viewed the overall package, including the colour, as being important in attracting users. Older students conceded that the

yellow vehicles were smart - and the embarrassment factor seemed to affect mainly those under 16 years in secondary schools.

Overall, students disliked the internal layout of the Blue Bird vehicles (but also the layout of the vehicles used in Norfolk), requesting more seat space and adequate luggage room - reflecting in part the quantity of equipment/books etc that students are carrying. The vehicles used in all the schemes except Ilkley have been introduced with high seating capacity to enable a service to be provided that does not necessitate any pupils standing or the use of double deck vehicles. (As a result, the safety benefits of this need have to be balanced against the discomfort factor for what is often a relatively short journey between home and school). However, students consistently requested additional legroom i.e. seat spacing on these vehicles.

Generally, the yellow bus users surveyed in Hebden Bridge, Wrexham and Runnymede gave more positive ratings to the scheme attributes than did non-users. The surveys at the beginning and the end of the first year of the pilot schemes in Hebden Bridge, Runnymede and Wrexham showed very little change in terms of respondent perceptions and importance ratings of the attributes across the year.

## **Modal shift**

### **Changes in bus use**

- The research suggests that the introduction of a "yellow bus package" of measures can generate positive modal shift away from cars, improve the perception of home to school transport, and can result in improved behaviour/reduced vandalism where this is the objective for their introduction.
- In Hebden Bridge and Runnymede where the yellow buses were introduced to achieve modal shift, change appears to have resulted initially in a shift from car to yellow bus. In Hebden Bridge there was an increase in the proportion of pupils travelling by bus from 5% prior to the scheme to 13% in September 2002. In Runnymede, the proportion travelling by bus has increased from 15% prior to the introduction of the yellow buses to 18% in September 2002.
- In both these pilot areas, yellow bus take up appears to have continued to rise throughout the school year, but by May 2003, the modal split figures suggest that this continued growth is due to a shift from walking and cycling to yellow buses, rather than a shift from car. In Runnymede, overall car use appears to have returned to pre yellow bus levels and in Hebden Bridge is again rising, suggesting that if yellow buses' initial impact is to be maintained, measures to discourage replacement car journeys will have to be introduced. Other schemes also report increased bus use and decreased car use, including in Ilkley and Wokingham.

### **Congestion**

- Focus groups with local residents resulted in mixed reactions as to whether benefits in local traffic congestion could be perceived. The reaction appeared, in part, to be influenced by the access to the school. Where the school is now being served by a bus, but previously had not been, the vehicle was perceived as large and blocking the local streets. However, responses in Runnymede were more mixed and clearly influenced by the particular school entrance, emphasising the need for adequate parking/access to school for vehicles if buses are to minimise congestion around the school gate.
- This reflects the survey responses and the review by Metro. The number of cars monitored arriving at the Hebden Bridge schools in June 2002 was approximately 50 fewer than prior to the yellow buses. The surveys suggests that this reduction was approximately 40 by September 2002 but that car use has since returned to pre yellow bus levels (although Metro's school gate survey suggests car arrivals at school have continued to fall).

### **Impact on walking and cycling**

- Yellow buses have abstracted some students from walking in Runnymede, where over the year there are approximately 70 fewer students walking. However, these results should be interpreted with some caution, as they are not "year on year" figures and mode does change during the year. In addition, the weather during May 2003 was particularly wet, deterring walking in particular. (This past two years have also seen a number of high profile abductions/murders of children, including Millie Dowler close to Runnymede schools, which received extensive press coverage between March and September 2002 which is likely to have had an impact on perceptions of personal safety and walking).

### **Impact on the local bus network**

- In Runnymede, there has been significant abstraction from an existing supported local bus service, with students transferring from local bus to yellow bus and resulting in the supported local bus service being removed. (In Greater Manchester, abstraction of students from local bus services was intentional, enabling an increase in the capacity on local bus services for other members of the public and improvement to the services for public transport users). Anecdotal reporting from residents in Surrey was that the abstraction from local bus services had improved the experience of public transport for local bus users.

### **Potential for further modal shift**

- The survey responses in the three main scheme areas shows some potential for further modal switch to buses, with the main reason for not using yellow buses being they are unavailable in their area, but also an indication of willingness to use them if they were.

## **Accessibility / Vehicle design issues**

### **Internal vehicle layout/design issues**

- The internal layout of the *First* yellow Blue Bird vehicles was commented on in all the focus groups in the three areas, particularly by secondary and post 16 students, with the tight seat spacing and lack of luggage space, and seat belts coming in for repeated criticism. (Similar criticisms were received from students in Norfolk).
- There was a perception that the yellow buses are larger than other buses, but often this was prompted by problems of school entrance layout, and topography. (The comments were also prompted in schools previously not served by buses, and where these had been introduced to encourage bus use).

### **Access to the vehicles**

- There were no reported problems of access to the Blue Bird vehicles by students or parents responding on behalf of younger pupils in any of the three areas. In one of the focus groups the high steps were commented on, in relation to their use by very young primary school pupils. Some schools did raise concern about wheelchair/ease of access for students with medical needs, particularly those with broken legs etc. In Greater Manchester where the vehicles are wheelchair accessible, this facility had reportedly been required only once, but "generally was not needed".
- Yellow buses have been introduced to replace double decker/high standee capacity vehicles in several of the areas and maximising the seating capacity is a major issue for local authorities to enable them to minimise costs from the change in vehicle type. However, if the vehicles were to be wheelchair accessible, it would mean a loss of seating to accommodate a wheelchair (although this loss of seating capacity would be balanced against the additional costs of separate specialist transport).

### **Potential impact on special needs transport**

- Current practice within the authorities shows that even if the yellow buses in all the scheme areas had been accessible (as in Manchester) it is unlikely that there would be a marked change in transport provision. This reflects: administrative arrangements, which often mitigate against integrated planning and provision of transport for pupils with special needs; the fact that transport staff respond to requests for transport from education staff who indicate the type of transport required - often indicating a need for taxi provision. In addition, increasingly the level of many needs of those pupils qualifying for 'special education' transport is increasing, precluding travel on any large vehicle.
- There is likely to be some potential for students with special needs to use yellow buses, and increasingly so if the vehicles are accessible. However, special education transport provision is a complex area and any change in provision will require changes to administrative practice and parental expectations, as well as improved assessments of need and support for pupils.

### **Safety and Security**

- There have been no casualties reported during the evaluation to date in any of the scheme areas. However, worryingly some local authorities reported the lack of resources to monitor such incidents should they occur, and several authorities do not appear to have reporting arrangements in place to ensure they are made aware of all incidents on their school transport contracts.
- The perception by parents and pupils in both the surveys and the focus groups was that the yellow buses are safer than other buses. Parents were particularly positive about the use of single deck vehicles, where the yellow buses had replaced double decker vehicles - which anecdotally reported reductions in bullying and vandalism.
- Seat belt provision was ranked as important by parents and pupils in the surveys, however, in the focus groups students conceded the belts were often not used. There were reported difficulties in using lap seat belts on the Blue Bird vehicles by secondary pupils generally. Teachers also reported that their use is difficult to enforce.
- The absence of escorts was a key safety feature of concern to some parents of primary pupils.

### **Financial issues**

#### **Affordability for users**

- Views on the affordability of the yellow bus schemes varied. In some areas, £1.00 per day was considered by users and parents as about the right amount to charge. In other areas, it was thought too expensive for primary pupils. Cost was seen by drivers, parents and residents alike as a major deterrent to yellow bus use in Hebden Bridge. However, the concerns were also about the payment arrangements, with the requirement for pre payment thought to cause some parents difficulties and deter usage.
- In the survey responses, cost was also a factor for students in Runnymede, with a high level of agreement with the statement that yellow buses are more expensive than local buses. In the focus groups in Greater Manchester and Harrogate the current level of fares was thought to be as high as parents/pupils would be willing to pay.

#### **Local authority perspective**

- Additional administrative costs for the local authorities and the schools were raised in several scheme areas, particularly where schools are handling pre payment.

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- The current often limited interest in providing school journeys at peak times by local bus and coach operators means that there are often few bidders for such school journey contracts. As a result market rates for yellow buses are now broadly comparable with rates obtained for other vehicles, and largely independent of the type of vehicle or standard of service specified.
- Analysis has shown that there is little difference in the costs of operating a yellow bus compared with a conventional coach providing an equivalent standard of service - although the maximum capacity of a conventional coach may be slightly lower.

### **Other issues**

- No specific link was found between improved attendance of pupils using the yellow buses and other pupils.
- The involvement of the school and closer liaison between authority and school staff was thought to be beneficial, particularly in Greater Manchester.

### **Summary**

- Overall, the evaluation has indicated that the success of yellow bus schemes is dependent upon the locality introduced, the objectives of and attributes of the vehicles/services, the careful routing of services and the relationship with the school. Consistent themes emerged from all the areas relating to the attributes liked and disliked, and these were not vehicle type specific.
- Overall, the yellow image was a positive factor for parents of young pupils and for residents, but less liked by secondary age pupils. However, whilst they did not rank the colour as an important factor they did perceive the yellow bus vehicles to be safer and of better quality than other buses. Seat belt provision was important, but consultation indicated that often these were not used in practice, and they need to be perceived as easy to use. The driver training and quality of driver was a key factor raised throughout the work.

### **Key features for rural primary school yellow bus scheme**

The project has looked at schemes introduced for pupils entitled and not entitled to free school transport, with objectives to improve quality and/or to encourage modal choice of bus rather than car. This work shows that key features for a successful school bus scheme for the primary school age group include:

- The vehicles should have a yellow colour and a distinctive livery;
- They should be driven by a specially selected and trained driver, allocated regularly to a route to enable drivers to get to know pupils and parents - this is crucial to the scheme;
- The vehicles should preferably be operated with an escort;
- The distance from home to pick up/ and school to drop off should be minimised to give assurances over safety;
- The services should not be available to the general public;
- They should be promoted by invitation to parents with an opportunity to visit and see vehicle;
- Training of pupils and evacuation training needs to be age sensitive;
- The vehicles should be equipped with lap and diagonal belts,
- CCTV should be used and
- The 3+2 layout and seat pitch/spacing on the Blue Bird buses is acceptable;

- On bus payment is preferable - with fare levels of between 40p to £1 depending on location being acceptable, however, discounts should be offered for multiple children to ensure a maximum charge level per family;
- A guaranteed seat should be available for all pupils - no pupil should have to stand; and
- A smaller vehicle to minimise journey times would be beneficial for younger pupils.

### **Key scheme features for secondary school pupils**

The secondary school yellow bus schemes in rural areas are aimed at pupils entitled to free transport and have been introduced to improve quality. In the suburban/urban areas they have been introduced for both entitled and non-entitled - whether to improve quality or to encourage modal choice.

Key points from this evaluation suggest that any successful school bus scheme for secondary pupils should include:

- Vehicles with a distinctive livery was the view of students, but that they should not be yellow;
- A specially selected and trained driver who is allocated on a regular basis to the same route should be provided to enable them to get to know students and the school;
- The distance to pick up/drop off and home/school should be minimised - for convenience if this is to be attractive as an alternative to the car;
- The vehicles should not be available to the general public - students felt that not having members of the public on the vehicle reduced the 'friction' and complaints;
- Promoted to pupils with home/school contract;
- Training of pupils and evacuation training should be provided at the start of the academic year to promote ownership/and set expectations of behaviour;
- CCTV should be provided, drivers welcomed this to minimise malicious allegations and students to reduce bullying;
- Luggage racks should be provided to maximise seat space;
- Additional leg room in comparison to the current vehicle layout would be beneficial;
- A seat guaranteed for each student and no standing, but with a seat allocated by agreement between students and driver at start of school year/term rather than imposed;
- On bus payment (not pre pay via schools) - at up to £1 per day (with discounts available for additional siblings);
- There should be a suitable drop-off location at the school entrance - preferably with suitable parking area for buses to reduce congestion at the school entrance; and
- Music/radio on vehicle - this was regarded as improving behaviour.

### **Barriers to further expansion of yellow bus schemes**

However, there are practical issues with the expansion of yellow bus schemes beyond pilot areas:

- The introduction of the yellow buses is clearly most welcomed where these are services not available to the general public, however, whilst in urban areas this may result in an improvement and additional capacity on the local bus network, in others it may affect the viability of the local bus network;

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- Regularly allocated, specifically trained drivers are a key element of the schemes. However, there are practical issues about driver availability and costs of further expansion of the scheme, although recruiting parents is one option.
- The costs of operating yellow buses compare with existing daily rates for school transport vehicles. However, where services are being introduced to attract car users to buses, parents/students appear willing to pay no more than £1 per day - a charging level which does not cover the full cost of the service, and necessitating subsidy if the schemes are to be expanded.
- The perceptions of the vehicles and their impact on congestion and safety are influenced by the suitability of school entrances. Where schools have not previously been served by buses, the arrival of new bus services is often perceived as worsening congestion/safety at school entrances.
- There are other factors such as the lack of co-ordinated school times, increasing parental preference of schools other than the nearest and greater flexibility of the school day, which all exacerbate the issues of cost control for school transport contracts and affect operational efficiency of vehicles.

### Issues requiring further research

The project has also identified a number of areas requiring further research including:

- Monitoring the potential of consistent packages of measures to achieve change in selected urban/rural and primary/secondary areas. The timescale for this project has also not allowed ongoing monitoring of year on year modal split data.
- The need to review the costs and benefits longer term of operating yellow buses.
- The schemes introduced to date have not resulted, or sought to integrate pupils with special educational needs. It is recommended that the willingness of and scope for transfer of pupils with special needs to specific vehicles be evaluated in selected areas.
- The appropriate way to carry pupils as young as four years of age on buses.

**A pdf version of the full report is available either from the link at the bottom of this page or at [www.dft.gov.uk/local-transport/schooltravel](http://www.dft.gov.uk/local-transport/schooltravel) in the "research findings" section.**

**A printed copy of the full report can be obtained from: John Colaclides, Branch CLT2, DfT, Zone 3/15, Great Minster House, 76 Marsham Street, London SW1P 4DR tel 020 7944 4897 e-mail [john.colaclides@dft.gsi.gov.uk](mailto:john.colaclides@dft.gsi.gov.uk).**