Scheduled bus use in natural and protected areas: visitor preferences and service design issues

Jo Guiver, Nick Davies and Richard Weston

[a]Introduction

The peace and tranquillity, natural or historic landscape of a protected area can easily be diminished by the traffic created by its visitors, threatening the very qualities they seek in the area. Yet car travel is the mode of choice for the majority of visitors to National Parks and rural areas with 70% to 90% of visitors arriving by car. Car offers the means to get to the area as well as travel around it, flexibility of timing, route and destination, protection if the weather turns bad and capacity to carry provisions and equipment. However, while car travel may offer its users a number of advantages, it imposes tremendous costs on the area, its residents and other visitors by occupying land for roads and parking, creating noise, pollution, congestion and danger, discouraging more sustainable forms of travel such as walking and cycling and vastly inflating the carbon count of tourism. In this age of individualised private mobility, the potential of public transport to reduce traffic and enhance a visit can be overlooked by both visitors and planners.

Using the same network as cars, buses offer a way of minimising the land use, pollution, noise, danger and congestion of car travel while taking away the need to navigate unfamiliar roads and affording the opportunity to gaze on the scenery. Additionally, they present opportunities to enhance the travel experience through interpretation, contact with local people, novelty and can encourage the use of more sustainable modes to reach the destination area, so reducing the global impact of tourism in the area. For walkers, they offer the chance to do linear walks without having to return the same way, particularly important along linear features such as coasts, rivers and hill ridges. They also open rural tourism to people without their own cars. In the UK, for example, 25% of households are without cars (Department for Transport, 2013, p4), a growing number of young

people have not learnt to drive or bought a car (Department for Transport, 2013, p4), many people do not drive for economic or ecological reasons, and 70% of overseas visitors (VisitEngland, 2008) arrive without a car, many of whom do not want to attempt to drive on the 'other side of the road'. While there has been considerable research into encouraging modal shift from cars to more sustainable forms of mobility for utility travel (see for example Jones and Sloman, 2003; Haq et al., 2008), there has been relatively little exploration of the necessary inducements for people to get out of their cars for leisure travel (Dickinson and Dickinson, 2006). Leisure travel differs from utility travel in a number of ways. By definition, it is discretionary and this refers not only to the decision about whether or not to travel, but also where, when, how and with whom to travel. Because destinations, as well as travel modes, can change, tourism providers are wary of discouraging car travel for fear of displacing trade to other areas. However, because, unlike utility travel, the journey is often an integral part of the tourism experience, there are opportunities to enhance the experience through the provision of novel, innovative or customised public transport services, which offer something better or different from private motoring.

This chapter first describes the benefits of scheduled bus services to visitors, tourism providers and the area's residents and economy, before discussing the key findings from our research into the attitudes and preferences of passengers using bus services in rural tourist areas in the UK. The next section discusses issues beyond the survey findings that affect the success of such bus services. The conclusions stress the importance of local knowledge in applying principles learnt from other areas. The chapter is illustrated with comments from respondents of surveys conducted in various protected areas around the UK.

[a]Benefits of buses in protected areas

Apart from the benefits of being able to do a linear walk and being able to travel within a destination area without needing a car or driving licence, well-planned visitor bus services can offer

a number of advantages to their passengers. Car drivers particularly can enjoy the luxury of being able to take in the view while a professional steers and navigates, with no need to seek or pay for parking. The height of a bus, especially a double decker bus, also affords much better views than cars in areas of hedges and stone walls. Even in a wind-swept, rainy country such as the UK, for example, there is a joy of riding an open-top double decker bus, with the wind in one's hair and the smells of the countryside (see Cornish Wools, 2011).

'Being from Germany I enjoy the English bus service a lot especially as you have double decker buses also with open tops; super for sightseeing. The friendliness and helpfulness of the drivers is also fantastic'.

Bus services provide potential to offer interpretation, through leaflets, guides or audio. Increasingly, packages are being promoted that offer bus travel and the use of other modes such as boat or ski lift within the area for a period of time (see golakes, the Lake District, 2014), as well as included or discounted entry into attractions (see Eden Project 2014). Several tourist services provide or sell leaflets about the walks that are possible from the bus route (see Brighton and Hove City Council 2014).

Residents benefit from reduction in demand for parking, road space and all the other externalities generated by road traffic. In addition, they can usually take advantage of improvements in bus services, be they cheaper fares, improved frequencies or better quality vehicles.

'I use the bus frequently and miss it during the winter months'.

Any improvement to the tourism offer in an area has the potential to attract more visitors. Providing opportunities for a visit without needing a car opens the area to market segments who might

otherwise not consider it, including young people and an increasing number of retired people, many of whom have considerable spending power. Attractions served by local buses can increase their revenue without provision of extra parking and frequently there are opportunities for joint marketing of both the bus service and the attractions along its route.

Apart from the obvious benefits to the local environment of reductions in pollution, parking space and congestion, moving people from private cars to public transport changes their spending patterns. Paying for bus fares rather than fuel helps keep money in the local economy and can increase local employment. Not needing a car for day trips makes it possible to arrive in the area by public transport, which reduces the carbon footprint of the whole holiday (Le Klähn et al., 2014) (see also Cumbria County Council and Lake District National Park Authority, 2011).

There are a number of economies of scale with bus services. Once a bus is running, it will be more efficient and sustainable to run it full rather than empty ("bums on seats"). Encouraging more passengers onto existing services can make them more economically viable and reduce the fuel and emissions per passenger kilometre. In Bavaria and the Black Forest (Germany), the introduction of a free travel for tourists on local public transport, financed by a modest bed-tax, is popular with tourists, transport providers and destination managers (Hilland, 2011; Wibner, 2012; Guiver and Stanford, 2014). Additional economies of scale result from denser networks, offering more destinations through interchange and integrated timetabling, ticketing and promotion between operators and modes.

[a]Evidence from research in the UK

Between 2005 and 2011 the Institute of Transport and Tourism at the University of Central Lancashire conducted 37 surveys of bus passengers in 24 rural tourist areas. These included National Parks (such as the Lake District, New Forest, Snowdonia and Loch Lomond and the Trossachs), Areas of Outstanding Natural Beauty such as the Forest of Bowland, Northumberland and the North Norfolk coast and other areas attracting day visitors and tourists (see Guiver and Lumsdon, 2006; Guiver and Davies, 2007; Guiver, 2012). Although there were differences in questionnaires, several basic questions remained the same, allowing the data to be compared. The findings quoted in this chapter refer to the most recent survey of nine tourist areas in 2010 and 2011. The respondents' quotations also originate from this survey.

[b]Visitors and their preferences

Passengers tend to be older than the national population, with 52% older than 60 and 19% over 70 years old. Pairs and solo travellers predominate. The main purposes for their trips are walking, visiting a place or attraction and seeing the countryside (although this is mainly a secondary reason for using the bus) (Figure 1).

Figure 1 Main and secondary reasons for using the bus.

The main way of knowing about the bus is having used it before (33%), yet 30% of respondents say they have never caught that bus before and 19% have never visited the area before. This demonstrates the need to cater for both the "bus-virgin" and the "bus-veteran". There are a variety of other ways of knowing about it: bus stop information, word of mouth and leaflets (each 11%), seeing bus (10%) and internet search (9%) and many people know about it through more than one channel, so it is important for transport providers to use several means of communication. A distinctive vehicle can be the best advertisement for a visitor bus service. This has been exploited for example by the Hadrian's Wall Bus in the North of England with its customised livery. One of the greatest issues in bus planning is understanding which alternatives potential passengers would choose if the service were not running. Passengers were asked what they would have done

had the bus service not been available. The results show that roughly equal proportions of the passengers would have stayed at home or in their holiday accommodation, gone to the same destination or another destination (Figure 2). This indicates that the buses have a social inclusion role, by providing travel opportunities for people who otherwise would not have travelled and help reduce car travel as one quarter of respondents would have used the car and contributed to local traffic in the absence of the bus service.

Figure 2 Choice of visitors if the bus had not been running. In case the same or a different destination is chosen, the preferred mode of transport is specified.

Since the introduction of nationwide, free concessionary bus travel for people over 60 years old in UK in 2008, the proportion of people who would go to other destinations by bus has increased. This creates a growing market of mode-dependent over destination-dependent visitors: that is, people who go where a bus allows them to go, rather than choosing a destination and then finding the best mode to reach it. Other related changes have been an increasing proportion of retired passengers and a greater number of men using the buses.

The survey results show a high level of overall satisfaction, which tends to increase with the age of the respondent. This is endorsed by the 89% of valid responses indicating that people would recommend the service to their friends. Figure 3 shows the relative ratings of all the attributes asked about. It is evident that satisfaction is high for all the attributes, although "Frequency of Service" generally falls below the average. Perhaps this is not surprising as many of these buses run at two-hourly or longer intervals.

'Excellent service. Frequency has improved from 2 hr to 1 hr'.

Figure 3 Evaluation of the bus service's attributes based on four classes (i.e. very poor, poor, good, very good). The percentages associated with the classes "very poor" and "poor" are shown below the zero.

Low frequency not only reduces choice about departure/arrival times, it can severely restrict flexibility about duration of stay at any destination. For example, in one of the areas analysed, a leisure route operating every two hours gave passengers the potential of stays of one hour ten minutes, four and a half hours or seven and a half hours at one of the destinations. An hourly service would have offered a much greater range of potential stays. When current bus users complain about the poor frequency, it is highly probable that this has already deterred other potential passengers. Unfortunately, recent rounds of local authority financial cuts in UK have further reduced many bus frequencies, which is likely to make them even less acceptable to passengers and result in a disproportionately high reduction in patronage. Not surprisingly, "More frequent buses" is the factor indicated as most likely to encourage bus use (73%), closely followed by "going to more places" (72%). Some areas, (Brecon Beacons and North York Moors) have improved the efficiency of their services and expanded the number of destinations for their passengers by operating a hub and spoke service, whereby buses congregate at a central point at certain times in the day enabling passengers to transfer. In the North York Moors National Park, prior to public service financial cuts in 2014, the service had been considerably enhanced by the presence of bus co-ordinators, who could answer passengers' questions, give them times and direct them to the right bus stops, etc. Several respondents requested later buses and it is clear that having last buses leaving in the afternoon truncates the day's activities, especially if passengers use the last bus as their "insurance" and try to catch the last but one, as often happens with public transport services. Confidence in catching the last bus can be increased by offering a free taxi service (with the number provided) if the bus fails to turn up (Lumsdon and Caffyn, 2013). Interestingly, people with a car available tend to be more satisfied than people without the option of using a car, possibly

because bus is their chosen mode and they do not feel captive to it. It seems that the provision of buses in rural protected areas is valued by car drivers and may even serve as an attractor to an area.

'More regular and frequent timings would be helpful'.

'The bus service in this area after 6.00pm is very poor on any route. Getting back from your destination is difficult'.

Regarding fares and ticketing, understandably, people qualifying for free concessionary bus travel are satisfied with the "value for money", while the least satisfied group tend to be young people. Larger groups also find bus travel costs compare unfavourably with travelling together in a car. Rover tickets, offering unlimited travel for a day or longer are generally popular.

'A teen ticket to subsidise 16-19 year olds'.

'One day ticket would be better'.

Most passengers are extremely happy with the quality of bus service. Many comment on the excellence of the drivers, how they help passengers and how they cope with difficult circumstances. However, it is clear that poor driver service can spoil the whole trip, while an unexpected consideration which increases enjoyment of the trip and can make it a social occasion.

'Not all drivers helpful. This driver very good'.

'Great service, lovely drivers (mostly), friendly atmosphere'.

'The driver on our bus was sociable, friendly and very helpful! It was a great journey and a comfortable ride with all road rules being observed'.

'Bus driver very helpful, also on previous trip he paused for a couple of minutes so that we could watch a deer in adjacent field'.

[b]Service Design issues

The research also revealed numerous issues relating to the design and practices of providing bus services in tourist areas in addition to the survey results. Among other issues, marketing and information are crucial to encouraging the use of bus services. In fact, people cannot use a bus they do not know exists and even if they know it is available they need to know where and when to catch it and something about the destination and journey. Decisions about the destination for some day trips during a holiday may have been taken before leaving home, though very few people will want precise times and stopping places much before they set out on their trip. Marketing materials mentioning or picturing the potential of travelling by bus, and any advantages or special attraction of using buses (e.g. open-top, possibilities of linear walks) will help sow the seed about using public transport. Travel articles by journalists, bloggers, etc. who have sampled the local public transport will also raise its profile. People arriving by public transport also need advice about suitable accommodation close to useful bus routes. Journey planners offer information about possible modes, when you know where you want to go: public transport users often want to specify the mode and be told the range of potential destinations. They also need information about how to get from the railway or coach station to their accommodation. This may need to be as precise as which bus stand to wait at, times of services and the ultimate destination of the bus or the telephone number for the local taxi company.

Once within the area, tourists may be searching for ideas about day trips. The destination is probably decided before or with the mode, hence it needs to be the focus of marketing. However, information about the cost, ease or advantages of using the bus can accompany the destination description. Once a decision has been made to use the local buses, much more precise information needs to be delivered in as concise and customised way as possible. Large timetables are daunting and most passengers only want to know the time the bus leaves the stop nearest to their accommodation, the journey time and/or the time of arrival at the destination with similar information for the return journey. Although large timetable booklets can be useful for planning multiple trips, they become an encumbrance if one needs to carry them around, especially if they do not fit into pockets or handbags. People with smart phones may be able to access information through the internet, but in many protected areas, there is poor or no signal or wifi. Many leisure trips take place at the weekend or on public holidays, when bus service is limited or absent. There can also be confusion about whether weekday or weekend services run on public holidays. This needs to be clearly marked on every timetable and, whenever possible, the service during holidays should be as similar as possible to that of weekdays. The difficult logistics of providing comprehensive and current information about bus services at bus stops (e.g. need to replace timetables periodically) was addressed in one area by solar-powered information and a link to allow passengers to speak to an information officer with current and real-time information. Such tools are particularly helpful for people new to the area or to using buses, and , unlike regular passengers, they may not know the geography of the area, the name of the terminal destination or even which side of the road to wait.

'All stops should be mentioned in the timetable. All stops need a sign. All signs need to indicate direction of travel'.

According to passengers, the most important improvement to a bus service would be an increased frequency of service. However, that depends on the ability to generate additional patronage; otherwise the result would be the same number of people using more buses. Yet there are a number of ways in which bus services could serve the needs of tourists better, and therefore attract a greater number of passengers. Time anchors, whereby people have to be at their destinations by specific times, are rarer for discretionary travel than utility travel, although there are some time constraints. People staying in serviced accommodation should not have to choose between a trip out and their breakfast. This means that, if there is only one outward journey in the morning, it should leave after people in hotels and guesthouses have breakfasted. Ideally the timetable should offer the option of a half or full day at the destination, although this obviously depends on the length of the journey, the type of activity undertaken at the destination and the resources available. Many complain, for example, that bus services finish very early in the day even when daylight lasts late into the evening, as it happens in northern summers. Downward and Lumsdon (2004) argue this limits the daily expenditure of bus users who, unlike motorists, cannot stop in the area for a drink and meal, if the last bus leaves at 4pm.

Connections with incoming public transport links open up the area to day-trippers within the region, but need to allow passenger time to transfer on both the inbound and outbound stages of the journey.

'Not enough time to get from train station to catch bus- about 7 minutes. Poor connection times'.

'First bus of the day connects with train at Llandovery. Pity the other buses do not connect. For example, the connection for Shrewsbury: you only have one minute if the bus is on time'.

With an area network, a variety of destinations can be made accessible from different origins through co-ordinated timetables, including the hub and spoke design. Failure to ensure scheduled

connections, however, can cause anxiety and frustration, rather than the positive emotions which generate repeated visits. Clockface timetables, with buses departing each stop at the same number of minutes past the hour throughout the day, are much easier to use for passengers and require less reliance on printed timetables, but are difficult to design. Many areas with limited funds have to trade off more frequent buses with the length of the season or the number of days the bus operates. Improvements in this respect can be made step by step. For example, the CoastHopper in Norfolk first proved its popularity, then increased its frequency and eventually extended its season.

'I would like this bus to run throughout the year'.

Tourists, particularly international visitors, to rural areas may book their holidays several months in advance and want some idea about how they can travel within the areas. With short-term funding, it has often proved impossible to issue definitive timetables in advance, which can lead some tourists to choose other areas, arrange a hire car or resolve to use their own car.

Like in many other areas around the world, the stereotypical view of buses in Britain is that they are unreliable and this is often given as the reason for not using buses (Guiver, 2007). Catching a bus in an area you do not know can be nerve-racking, especially if it does not turn up when you expect it or you are waiting in uncomfortable surroundings (e.g. bus shelters are sometimes not permitted in protected areas). Lack of familiarity can also create perceptions of unreliability, which can be allayed with more detailed or readily available information.

'All the bus stops need timetables'.

'At the bus stop in Crickhowell I couldn't see the x43 bus timetable so was glad I had printed it off the internet'.

Unreliability often occurs for reasons outside the bus operator's control. Narrow country roads, accidents, local festivals, haymaking, animal movements, motorists' poor driving and parking can impact on reliability, which in turn diminishes confidence in using the service.

'If the 27 would run more to the timetable I would travel more often. Always miss the connection for Breeze up to the Downs or the 13x'.

'Sunday 12/9 bus 10.03 from Hexham Station broke down. Driver apparently unable to communicate with passengers'.

Fares are also a crucial issue in the design of a bus service. People on low incomes (often without a car) tend to be the most price sensitive, so high fares may prevent them from travelling. However, car users also do not usually make a full estimate of the costs of fuel, parking, etc. (Gardner and Abraham, 2007), so may see car travel as cheaper than highly priced bus services. This is particularly true for families and groups.

'Bus fares for one person are ok. Two adults or family travelling is probably more expensive than a car'.

Among ways to reduce fare burden are group tickets, combined parking and bus tickets, packages of fare and entrance fees for specific attractions and rover tickets for multiday unlimited travel within an area. The latter have proved extremely popular and can lift an uncommercial service into breaking even.

While bus users' opinions are useful, those of the potential market of car users are possibly more important. The results of a parallel survey on motorists (Lake District, 2006) showed that most of these believe they chose their destination and then selected the best way to get there. However,

although they knew where to find bus information, very few consulted it. This suggests they actually will go to the destination by car, unless information making public transport look more attractive intervenes in their decision-making process. It also confirms the views of tourist attraction managers who see the mode markets as completely separate, with almost no transfer between modes. That is why managers are happy to improve facilities for walkers, cyclists and bus users who represent new markets, but are unwilling to instigate any measures that might deter car-users, as these would probably redirect them to another more welcoming area and might even lengthen their journeys.

[a]Conclusions

Bus services running on the same road network as private cars provide the most readily available alternative to private cars in protected areas. Encouraging the use of public transport instead of cars helps reduce pollution, noise, danger and emissions within protected areas, this enhancing the experience of being in the natural landscape for everyone. Using buses can also benefit travellers by reducing the stress of driving, offering novelty, interpretation, greater connection with the area and the opportunity to do linear walks. Buses also open up protected areas to people without cars, whose taxes also contribute to the preservation of such areas. However, providing attractive services for people who may be unfamiliar with the area or with using buses needs attention to details. Visitors' journeys often begin before they arrive in the area, finding information in brochures, magazines and on the internet. Many choices are inter-linked: travel to and within the area, travel mode and location of the accommodation, travel and potential activities and plans which allow or rule out the use of public transport can be made early in the process. The most desired quality wanted by passengers is a high frequency of service. This has to be provided intelligently, with a view to the destinations and activities that potential passengers can

access and the length of time they might want to spend there. Once the service is in place, it needs

to be marketed and made visible to visitors to the area. The bus itself is often its own advertisement, especially when it is full of happy passengers. Monitoring the performance of the bus, how it is being used, whether passengers are being attracted to the area or out of their cars and how much they are spending is important for the long-term survival of the service. However, each area is unique, part of the "placeness" visitors hope to sample on their visit. Visitors are equally very different, with different expectations, needs and desires. Thus, while the generic qualities of a good bus service for visitors can be loosely described, there is no substitute for applied and detailed local knowledge, the imagination to see what could be achieved and the persistence to make others believe it.

References

Brighton and Hove City Council. (2014) *Breeze up to the Downs!* [Online]. Brighton. www.brightonhove.gov.uk/content/parking-and-travel/travel-transport-and-road-safety/breeze-downs-0, accessed 5 March 2014

Coulson, B. (2010) Personal Communication to Guiver, J.

Coulson, B. (2011) Moving around the North Norfolk coast. *Funding buses in tourist areas*. University of Central Lancashire, Preston.

Cornish Wools (2011) *Whee!!! and off we go – A day out on the 'Open Top Bus'*, news.cornishwools.co.uk/?p=952, accessed 3 March 2014

Cumbria County Council and Lake District National Park Authority (2011) *Lake District Sustainable Visitor Transport Beacon Area*. Bid to Department for Transport.

Department for Transport (2013) *Statistical Release: National Travel Survey*: 2012. London: Department for Transport

Dickinson, J. E. and Dickinson, J. A. (2006) 'Local Transport and Social Representations: Challenging the assumptions for sustainable tourism', *Journal of Sustainable Tourism*, vol 14. no 2, pp.192-208

Downward, P. and Lumsdon, L. (2004) 'Tourism transport and visitor spending: a study in the North York Moors National Park', UK. *Journal of Travel Research*, vol 42. no 4, pp. 415-420

Eden Project (2014) *Tickets and Tours*, www.edenproject.com/visit-us/tickets-and-tours, accessed 5 May 2014

Gardner, B. and Abraham, C. (2007) What drives car use? A grounded theory analysis of commuters' reasons for driving. *Transportation Research Part F: Traffic Psychology and Behaviour*, vol 10, no 3, pp. 187-200

golakes: the lake district. 2014. Combined Travel Tickets, www.golakes.co.uk/travel/tickets-multimodel.aspx accessed 5th May 2014

Gregory, C. (2011) The New Forest Tour: Funding Models and lots more. Funding for Buses in Tourist Areas. University of Central Lancashire, Preston

Guiver, J. (2012 a). Measuring the Costs and Benefits of Buses used for Leisure Trips. Transport Practitioners Conference. Liverpool. Guiver, J. (2012 b). How can you estimate the value of a bus service? Evaluating buses in tourist areas, Association for European Transport, Glasgow

Guiver, J. and Davies, N. (2007) Tourism on Board 2006.

Guiver, J. and Lumsdon, L. (2006) Tourism on Board. Institute of Transport and Tourism, Preston

Guiver, J. and Stanford, D. (2014) 'Why destination visitor travel planning falls between the cracks', *Journal of Destination Marketing & Management vol 3, no 3 pp140-151*

Guiver, J. (2007) 'Modal talk: discourse analysis of how people talk about bus and car travel.', *Transportation Research Part A: Policy and Practice*, vol 41. no 3, pp 233-248

Guiver, J., Lumsdon, L., Weston, R. and Ferguson, M. (2007) 'Do buses help meet tourism objectives? The contribution and potential of scheduled buses in rural destination areas', *Transport Policy*, vol 14. no 4, pp. 275-282

Haq, G., Whitelegg, J., Cinderby, S. and Owen, A. (2008) 'The use of personalised social marketing to foster voluntary behavioural change for sustainable travel and lifestyles', *Local Environment*, vol 13, no7, pp. 549-569

Hilland, S. (2010) The Black Forest and its KONUS Guest Card. Funding Buses in Tourist Areas. University of Central Lancashire, Preston

Jones, P. and Sloman, L. (2003) Encouraging behavioural change through marketing and management: what can be achieved. *10th International Conference on Travel Behaviour Research*, Lucerne,

Switzerland, pp. 10-15

Le-Klähn, D. T., Gerike, R. and Hall, C. M. (2014) 'Visitor users vs. non-users of public transport: The case of Munich, Germany', *Journal of Destination Marketing & Management*. vol 3, no 3, pp 152-161

Lumsdon, L. and Caffyn, A. (2012) *Brecon Beacons and Powys Visitor Transport Plan*. Brecon Beacons National Park Authority,

Peak District National Park Authority (2012) *Sustainable Transport Action Plan*. Bakewell, Derbyshire. Research Team (2013) *Visitor Survey 2013*. New Forest National Park,

Speakman, C. (2011) Interview for Seasonal Buses Project. Personal Communication to Guiver, J.

Transport For Leisure Ltd. (2000) *Transport Tourism and the Environment in Scotland*, Scottish Natural Heritage, Inverness

VisitEngland (2008) Destination Manager's Toolkit: Sustainable Visitor Transport. VisitEngland.

Wibmer, C. (2012) Where public transport runs on GUTi : GUTi Gasteservice Umwelt-Ticket Guest-Service-Ticket for sustainable environment. *Association of European Transport Conference*. Glasgow.