



REPORT

Jam Packed

Part I: Audience Travel Emissions from Festivals

May 2009



Jam Packed

Part I: Audience Travel Emissions from Festivals



CONTENTS

Foreword Melvin Benn	2	FULL REPORT	
Foreword Dr Jillian Anable	3	Section 1: Greenhouse Gas Emissions from Music Audience Travel	10
Executive Summary	4	Section 2: Festival Audience Travel Research Study	14
About the Authors	9	Section 3: Research Findings	19
About Julie's Bicycle	9	Section 4: Conclusions	42
		Section 5: Recommendations	43
		References	44
		Appendices	
		Appendix I:	45
		National and Local Authority Green Travel Initiatives	
		Appendix II:	49
		Anecdotal Positive and Negative Feedback from Coach Travellers to Festivals	
		Appendix III:	51
		Research Surveys	
		i. Promoter	
		ii. All Festival Goer Attitudinal	
		iii. Coach Festival Goer Attitudinal – version 1	
		iv. Coach Festival Goer Attitudinal – version 2	
		Acknowledgements	75
		List of figures, tables and case studies	76

Authors: Catherine Bottrill, Stavros Papageorgiou & Meegan Jones

© Julie's Bicycle 2009

Foreword

Melvin Benn

CEO Festival Republic

Over the last decade the festival sector has grown enormously: in 2008 over a million festival goers gathered to share music and company. In the same decade the consequences of fossil fuel based economies have become horribly clear – nothing short of the widespread destruction of ecosystems, and dramatic climate events on an unimaginable scale. The latest science suggests that the current trajectory of greenhouse gas (GHG) emissions will trigger a temperature rise above 6 degrees – the worst case scenario suggested by the Intergovernmental Panel on Climate Change¹.

Many festivals have made real efforts to reduce environmental degradation. Recycling waste, Waste Vegetable Oil biodiesel, locally sourced food supplies, responsible water use, composting, and occasionally on-site renewable energy have been part of festival planning for some time now. In their beautiful locations greenfield festivals can, and some do, strongly communicate the ethics of sustainability.

But we need to do much more, starting with the reduction of GHG emissions. This comes down to two areas: travel and transportation to the event and the energy supply to the site.

The biggest problem, by far, is audience travel: it produces 68%² of the festival sector's total emissions and 24% of all music audience travel emissions.

This report is the first cross industry response to this issue. We've started by examining audience attitudes and behaviour in relation to festival travel. This is only one piece of the picture, but an important one; over the next year we hope to extend our research to concerts and touring.

We have a big opportunity to make a difference and I invite other event organisers from across the cultural and sports sectors to work with us on this problem.

I would like to thank all the promoters, volunteers, travel operators, researchers, scientists and the thousands of festival goers who contributed to this study. The list of contributors, at the back of this report, gives an idea of the scale of this undertaking. It is the largest of its kind and we hope that, at the very least, it has captured a rich data set which might inform all of us responsible for making festivals in the UK and Ireland the best in the world and the most climate responsible too. I would particularly like to thank Dr Anable for her authoritative and encouraging words, Meegan Jones, Catherine Bottrill and Stavros Papageorgiou for their extraordinary work, and Alison Tickell and Catherine Langabeer at Julie's Bicycle, without whom we would not have started this project at all.

Finally, if we are to bring our emissions down to manageable levels and adapt to existing climate impacts every last one of us must focus on this issue, understand what we can do, and get on with doing it.



¹ IPCC (2007a). Intergovernmental Panel on Climate Change 4th Assessment Report – Climate Change 2007: Synthesis Report – Summary for Policymakers. Cambridge University Press, Cambridge

² Approximately 57,000 tonnes (t) of Carbon Dioxide equivalent (CO₂e)

Foreword

Dr Jillian Anable

Centre for Transport Research,

Aberdeen University and UK Energy Research Centre

Achieving the UK Government's targets to reduce carbon emissions will only be possible if all sectors of the economy pull strongly in the same direction. The transport sector accounts for almost a third of UK Carbon Dioxide emissions and yet is the only sector where emissions have been consistently rising year on year. Due to ever rising transport demands, technological solutions are extremely unlikely to come on line quickly enough to reverse this trend. Thus, developing low carbon transport networks and encouraging different journey patterns are critical. If transport continues to shirk its responsibility, which areas will compensate?

Yet, when policy makers and researchers approach transport problems, they put most effort into urban journeys for commuting and the journey to school. This is despite the fact that the latter accounts for less than 2% of all distance travelled by surface transport modes. By contrast leisure activities, largely ignored, are responsible for around 40%.

This study is a vital attempt to begin to redress this balance and examine travel choices from a different angle. It is a pioneering piece of research into the travel patterns and demands of an important UK leisure activity – music festivals. By bringing together evidence from across the festival sector, the study has provided a rich picture of the issues at play for affecting audience travel choices. From this new evidence can come concrete actions to influence audience travel behaviour and to greatly improve low carbon travel options.

But, in my view, this study has the potential to reach far beyond its immediate sphere of influence. Whilst music festivals themselves are responsible for a small fraction of journeys made by individuals, the music industry is a centerpiece of the broader cultural sector. Together, these industries can play a pivotal role in shaping leisure travel to minimise its environmental impact thereby making a significant contribution to transport emission reductions.

Even more important is the power of music, popular culture and associated social networks to influence issues of sustainability and the bounds of what is 'normal' behaviour. Music is a source of inspiration and creativity, and this certainly holds true for festivals, which bring together a community for extraordinary experiences. Although the emissions of the sector are relatively small they expose audiences to alternative ways of doing things that if mainstreamed into everyday life could greatly reduce emissions.

Part of the process of becoming a climate responsible society is embedding low carbon choices in all aspects of social life. But leisure travel embodies notions of freedom, convenience and spontaneity all of which are closely associated with car travel. Altogether, understanding how to influence leisure travel patterns could unlock far-reaching changes in attitudes and choices about travel.

I am hopeful this study is the start of something much bigger. More work is needed to understand travel patterns and motivations for different types of leisure activity. Greater attention by policy makers and service providers requires a more substantial evidence base on which to design holistic solutions which match people's lives and expectations.

This is a much welcomed start from the music industry on which to build momentum with other cultural sectors, transport academics and policymakers. I hope they come together to devise visionary approaches and policies to understand and influence social norms and travel practices and reduce carbon emissions.

Executive Summary

UK Transport Emissions

In December 2008 The UK Climate Change Act committed to legislation a reduction in GHG emissions of 80% by 2050³ and in April 2009 the Chancellor unveiled the world's first carbon budget⁴, pledging to cut emissions to 34 per cent on 1990 levels by 2020. In this context, domestic transport accounts for nearly a third of UK carbon emissions – 129 million t CO₂ per year.

Since 1950 the population of the UK has increased by a fifth from 50 million to 60 million people. In that same period passenger miles travelled per year have increased 4-fold, from 136 to 508 billion. Even more significantly most of these journeys were taken by car. In 1952, 27% of passenger miles were by car, 42% by bus or coach and 18% by train. But by 2005, a staggering 85% of passenger miles were by car with just 6% by bus or coach and 7% by train.

Significantly, 39% of passenger miles are generated by leisure activities⁵.

Central government has introduced a number of policies intended to reduce transport emissions, such as: vehicle exercise duty, fuel taxes, renewable transport fuel obligation, fuel efficiency labelling on new cars, consumer awareness campaigns, investment in public transport networks as well as support for electric cars and re-charging infrastructure. However, these policies have not been, and are not going to be, enough to deliver CO₂ cuts of 26 million tonnes.

Achieving this shift will require a new, integrated vision of transport policies, infrastructure, technologies and practices which will involve central and local government, travel operators, businesses and users.

This study investigates the attitudes and behaviours of audiences travelling to festivals as the first contribution towards lowering travel emissions in the music industry.⁶

Music Industry & Audience Travel

The UK music industry is not a carbon intensive industry. However, it has committed to understanding its GHG emissions profile and reducing its impact alongside the national 80% reduction target. Furthermore, it is an important lifestyle industry with global reach, and therefore has a responsibility to promote low carbon living.

In 2008, Julie's Bicycle released the findings of the report First Step: UK Music Industry Greenhouse Gas Emissions 2007⁷. The report identified that annual audience travel to music events accounts for 43 per cent (231,000 t CO₂e) of GHG emissions from the UK music industry⁸.

Julie's Bicycle convened a small group, chaired by Melvin Benn (CEO Festival Republic) and supported by a wider constituency of promoters, to identify next steps. Research priorities were to analyse audience attitudes to festival travel and other live events, promote dialogue between operators, promoters and local authorities, and identify barriers and opportunities to reduce emissions.

Audience travel is an indirect GHG emissions source and therefore impossible for the music industry to control wholly by itself. It requires a complex, imaginative and coordinated approach across a range of parties, taking into account transport infrastructure, audience attitudes, commercial pressures, and local concerns. Committed partnerships focused on emissions reductions are needed between the music industry, local authorities, travel operators and non-government organisations.

³ www.decc.gov.uk/en/content/cms/legislation/cc_act_08

⁴ The UK budget 2009 promised to cut greenhouse gases by 34% by 2020 through so-called carbon budgets, which fix binding limits on greenhouse gas emissions over five-year periods. The 34% target is in line with the advice of the government's independent watchdog, the Committee on Climate Change.

⁵ Department of Transport (2008). Transport Statistics Great Britain 2007, 33rd Edition. The Stationery Office, London

⁶ Julie's Bicycle has commissioned a piece of research on touring impacts and opportunities, and will be researching travel to live events (arenas and venues) as the second stage of this project.

⁷ Bottrill, C., Boycoff, M., Lye, G. and Liverman, D. (2008). First Step: UK Music Industry Greenhouse Gas Emissions 2007. Environmental Change Institute, Oxford University, Oxford

⁸ *ibid*

Festival Audience Travel

The first part of our study, contained in this report, is focused on festival travel, and in particular greenfield festivals. Audience travel results in two-thirds (c 57,000 t CO₂e) of the festival sector's emissions and a quarter of all music audience travel emissions.

Festival audience travel represents only a small proportion of all UK travel emissions; however, engaging audiences around the environmental impacts of travel choices when attending these iconic events is a first step towards wider adoption of low carbon travel in everyday life.

Music festivals attract audiences from across the country. They are often not on convenient rail or bus networks, which can handle significant numbers. Consequently the car is perceived as the most convenient mode of transport.

Festivals are brief, seasonal events and it is assumed that all aspects – including audience travel – are the promoter's responsibility. But audience travel and the emissions caused by thousands of people travelling to festivals are produced by a complex chain of choices and influencing these choices means addressing a series of obstacles: lack of facilities, lack of demand, lack of audience incentives, local authority restrictions, temporary site structures and resident's impacts. Therefore, if audience travel emissions are to be reduced, a concerted and coordinated effort across the supply chain is required from promoters, ticket distributors, travel operators, local authorities and, importantly, the audience.

The Study of Audience Travel: Attitudes and Behaviours to UK Festivals

In the summer of 2008 fourteen festivals across the United Kingdom and Ireland participated in this study, commissioned by Julie's Bicycle and delivered in partnership with De Montfort University, the Environmental Change Institute, University of Oxford, Festival Republic, Live Nation, Surrey University and a team of volunteers from Bucks New University. All the contributing promoters donated tickets and incentives to the volunteer teams.

The festivals participating in the study are representative of major (more than 60,000 people) and large (between 20,000 to 60,000 people) festivals.

The findings were extrapolated from:

- analysis of car occupancy rates of at least 1,700 cars for 8 festivals
- geo-location analysis of distance travelled by festival goers using ticket mailing locations information from 4 festivals
- festival goer attitudinal survey completed by more than 1,200 people
- coach traveller attitudinal survey completed by more than 1,000 people
- promoter survey completed by 13 festival organisers

Findings

Headline findings of the study are presented below, but for a full presentation of results with an in-depth analysis we recommend you read the full report.

Audience travel behaviour

- Three-quarters of those going to a greenfield or peri-urban (i.e. within reasonable proximity to a city or town) festival travelled by car (72% and 68% respectively). The remaining proportion was fairly split between coach and train travellers.
- The average one-way distance travelled ranged from 70 miles to 140 miles depending on proximity to an urban area. The average car occupancy to festivals was between 2.36 to 2.77 people per car with the average found to be 2.6. Close to two-thirds (60%) of cars travelling to festivals have two or less people travelling in them.
- Half of greenfield and peri-urban festival goers were not aware of the availability of coach (55%) and train (47%) services. In addition, organised car liftshare schemes had the lowest level of awareness (26%).

Audience travel incentives

- The three most popular incentives that festival goers stated would encourage them to car liftshare were: food, drink, music vouchers (58%); preferential camping allocation (43%); and lower car parking rates (34%).
- The three most popular incentives that festival goers stated would encourage them to use public transport were: discount on public transport ticket (60%); food, drink, music vouchers (54%); and preferential camping allocation (32%).
- A large proportion of festival goers (43%) were willing to pay a notional £2 on their festival entrance ticket if the money was used to improve public transport infrastructure. However, a larger proportion (56%) were not willing to pay an additional £2. Festival goers at festivals further away from public transport were more willing to pay the £2 to improve public transport services.

Carbon responsibility for travel emissions

- Festival goers perceive trains (39%) as producing the lowest carbon emissions per person travelling 100 miles, followed by coach (32%) and car with 2 people (12%). Almost a fifth (17%) of respondents did not know which transport mode would produce the lowest carbon emissions. In actuality a coach at full capacity is likely to be the most carbon efficient transport mode, especially for greenfield festivals.
- A third (39%) of festival goers thought that they were most responsible for reducing carbon emissions; a third thought responsibility lay primarily with festival organisers (34%); and the remaining festival goers thought that either transport operators, local authorities or national government were most responsible for festival goers' travel emissions.
- More than half of festival organisers participating in this study have done, or are doing, carbon audits to estimate the GHG emissions resulting from audience travel to their festivals. The information from these audits is intended to inform the development of a transport strategy that would reduce emissions and alleviate traffic congestion for their festivals.

Travel initiatives reducing emissions

- A significant number of festivals are proactive in environmental initiatives and campaigns concerning audience travel, but these initiatives are mainly done on an ad hoc basis; they are not part of a systematic audience travel plan and are not given the prominence needed for high uptake.
- Current incentives that reduce both emissions and congestion include:
 - a. combined coach & entrance ticket (with, in some cases, committing a percentage of tickets be sold this way)
 - b. car parking charges
 - c. no car parking charge for fully occupied cars
 - d. shuttle services between festival sites and train stations
 - e. promotion of travel options on the websites of festivals and transport operators

- f. opportunities to rent camping equipment
- g. opportunities to buy beer cases on-site
- h. the option to purchase carbon offsets for travel

Barriers to changing audience travel behaviour

- The main barriers festival organisers foresee in getting festival goers to use public transport are:
 - a. the comparatively lower cost in many cases of travelling to the festival by car
 - b. the perceived lack of convenience, reliability and comfort compared to coming by car
 - c. the logistics of bringing camping equipment on public transport
 - d. limited ability to make requirements on festival goers because there is no obvious commercial rationale
- Public transport options are often communicated to audiences when they purchase their festival tickets which can be months in advance of when they typically plan their journeys. In addition, people often try to co-ordinate travel with friends so need travel options which allow some flexibility

Suggested effective measures by organisers for reducing travel emissions

- Festival organisers thought the most effective measures for increasing the uptake of public transport to festivals were:
 - a. offering a free or subsidised public transport service
 - b. promoting more urban based festivals
 - c. allocating a proportion of entrance tickets to be combined with public transport tickets
 - d. car parking charges and reductions for full cars
 - e. offering camping rentals
 - f. selling supplies on-site
- Festival organisers also identified the critical issue of who should bear the commercial cost of providing these incentives and how costs can be jointly shared.

Conclusions

The car is likely to continue to remain the predominant mode for audience festival travel due to its perceived convenience and relatively low cost compared to public transport options.

Many festival goers using public transport have positive experiences and are likely to use it again in subsequent years. However, the provision of a high quality public transport service must be maintained in terms of reliability, flexibility, punctuality, organisation (at bus station and festival site) and friendliness of staff to ensure future use and recommendation to friends.

Festival goers are reasonably aware of public transport options available and that these options have a lower emissions profile. However, awareness of public transport options and transports' environmental impacts is not sufficient motivation to change travel behaviour without incentives and disincentives.

Festivals will need to customise travel emissions reduction strategies to fit their audience and locality. Promoters' knowledge of their audience is an essential basis from which to devise and communicate effective travel campaigns.

Promoters are beginning to develop transport strategies to reduce audience travel emissions. But their ability to act will be limited without wider support, in particular from travel operators and local authorities.

Recommendations

1. Build Partnerships

- Build focused partnerships between event organisers, travel operators, local authorities and other relevant actors to reduce travel emissions.

2. Develop Information Resources

- Better non-commercial travel information and advice presented in an accessible and relevant format, specifically:

i. A web-based information and application tool for festival goers providing clear communication messages about travel choices, carbon impacts and the solutions and support available for reducing emissions.

ii. A web-based information portal for music event organisers and other relevant stakeholders (i.e. travel operators, local authorities, and travel campaign organisations) to provide resources and support to the festival sector, which could extend to other cultural event organisers. The portal should:

- gather existing schemes and indicate the impacts in terms of take up and carbon reduction
- identify audience members to target for further take up
- share good practice with an emphasis on effective ways of shifting audience travel towards low carbon behaviours.

3. Support Leisure Travel Innovations

- Extend and develop incentive and disincentive schemes to increase the uptake of public transport services to music events and communicate carbon impact findings to relevant stakeholders.

- Extend and develop existing coach schemes and increase incentives for coach ticket purchasing.

- Support market adoption of innovative low carbon car technology by generating partnerships, for example, with car hire services/manufacturers to provide cars for rental to music and cultural events.

4. Monitor Audience Travel Emissions

- Music events should undertake regular audits of audience travel. The Carbon Sink, an energy measurement and benchmarking tool developed by Julie's Bicycle⁹, is available to event organisers. It provides a standardised means for calculating audience travel emissions from events.

- Use industry benchmarks to determine performance for audience travel emissions

- Continued research of audience travel to music events. Extend the research of audience travel patterns and attitudes to venue-based music events. In addition, undertake research of the incentives and disincentives that could motivate changes in leisure travel behaviour as well as the best means of communicating low carbon travel options.

5. Travel Strategies & Communication

- The development of targeted and context specific strategies to reduce emissions, especially from travel to greenfield sites.

- Low carbon travel options should be set out with the priorities, concerns and interests of festival audiences in mind so as to inspire people to take them up.

- Work with existing public transport providers (National Rail, National Express/Coach Services, Liftshare, and cycling organisations etc.) to create festival and outdoor event specific campaigns, which will appeal to audiences.

6. Bi-Annual High Level Roundtable for Leisure Travel

- A bi-annual high level Leisure Travel Roundtable of key event organisers in the cultural sector (e.g. music, sport, National Trust etc.), travel operators, and government (e.g. representative from DCLG, DCMS, DECC, and DfT¹⁰) to develop joint vision and strategies for transforming to low carbon leisure travel. The roundtable would be the planning forum for the Summit setting the agenda and identifying realistic targets and commitments.

7. A Bi-Annual Leisure Travel Summit

- For cultural organisations, travel operators, local authorities, applicable government departments, audience/membership representatives and other stakeholders. The Summit would be one of the means along with the web information portal by which knowledge gets disseminated. The Leisure Travel Roundtable and Summit would be cross-cultural sectors – and the Julie's Bicycle travel working group would be focusing on the specific travel issues of the music industry and feeding into the cross industry travel initiatives.

⁹ www.juliesbicycle.com/resources

¹⁰ UK Government Departments of Communities and Local Government; Culture Media and Sport; Energy and Climate Change; and Transport respectively

About the Authors

Catherine Bottrill was the principle researcher of Julie's Bicycle First Step report and contributed to Julie's Bicycle CD Packaging report. She is an expert in music industry carbon management, personal carbon allowances, calculators and labelling. Catherine is currently a post graduate researcher with the RESOLVE group at University of Surrey, which is investigating lifestyles, values and environment.

Stavros Papageorgiou has a Masters in Environmental Management from Oxford University. He now works on the development of carbon markets for Conservation International in Washington DC.

Meegan Jones works seasonally for Festival Republic as Sustainability Co-ordinator for the company's events including Latitude, Reading, Leeds and Glastonbury Festivals. She has just completed a book 'Sustainable Event Management: A Practical Guide' which will be published through Earthscan, released December 2009.

About Julie's Bicycle

Julie's Bicycle is a not-for-profit company helping the music industry cut its greenhouse gas emissions and create a low carbon future. Julie's Bicycle has brought together a broad consensus of support from the music industry to make a difference on climate change.

Research

Bottrill, C., Lye, G., Boycoff, M., and Liverman, D. (2008). First Step: UK Music Industry Greenhouse Gas Emissions 2007. Environmental Change Institute, Oxford University, Oxford

Julie's Bicycle, Arup, Environmental Change Institute and Purchasing for Profit (2009). Impacts and Opportunities: Reducing the Emissions of CD Packaging. Julie's Bicycle, London

Bottrill C., Papageorgiou S., and Jones M. (2009). Jam Packed – Part I: Audience Travel Emissions from Festivals 2008. Julie's Bicycle, London

Resources

Greater London Authority, Julie's Bicycle (2009). Green Music: Taking Action on Climate Change, Greater London Authority, London.

Industry Green Standards Framework



A set of standards designed to engage, measure, reduce and disclose carbon impacts. Standards are available in CD Packaging, Venues, Festivals & Outdoor Events and Offices.

Successful completion of an Industry Green Standard entitles use of the IG mark.

Carbon Sink Benchmarks

Online energy management measurement tools to benchmark performance against other, similar, operations. Carbon Sink benchmarks are available in Venues, Festivals and Outdoor Events, Touring and Offices. www.juliesbicycle.com/resources

Section I: Travel & Greenhouse Gas Emissions

In December 2008 The UK Climate Change Act committed to legislation a reduction in greenhouse gas emissions of 80% by 2050¹¹ and in April 2009 the Chancellor unveiled the world's first carbon budget, pledging to cut emissions 34 per cent on 1990 levels by 2020. In this context, domestic transport accounts for nearly a third of UK carbon emissions – 129 million t CO₂ per year. This means that cuts in the region of 26 million tonnes of CO₂ in the transport sector need to be made within the next decade to meet the 2020 interim target if responsibility is apportioned equally to sectors.

Since 1950 the population of the UK has increased by a fifth from 50 million to 60 million people, and in that same period passenger miles travelled per year have increased 4-fold, from 136 to 508 billion. This period is the age of the car: in 1952, 27% of passenger miles were by car, 42% by bus or coach, 18% by train, but by 2005 a staggering 85% of passenger miles were by car with just 6% by bus or coach and 7% by train (Department for Transport, 2008).

Examining the total trip miles for a year (averaged 7,133 miles in 2006) by purpose shows that 39% of the mileage was from leisure activities, 29% from commuting/business travel and 13% from shopping (for 2006). This illustrates the importance of developing well-designed and targeted travel strategies to reduce emissions.

The sheer increase in miles travelled and the transport modal shift to the car has caused significant increases in GHG emissions despite progress made in fuel efficiency. The government has introduced a number of policies and initiatives such as: vehicle exercise duty, fuel taxes, renewable transport fuel obligation, fuel efficiency labelling on new cars, consumer awareness campaigns, investment in public transport networks as well as support for electric cars and re-charging infrastructure (see Appendix I National and Local Authority Green Travel Initiatives). However, it has been recognised that policies and initiatives intended to affect 'behaviour' (i.e. changing travel choices and reducing car travel) are not as well understood as technologically targeted policies and initiatives. A recent review has revealed that policies can change behaviour and have the potential to make a real impact on carbon emissions. In addition, there is evidence this can be done at low cost (Anable et. al, 2009).

Transforming travel requires a shared vision: transport policies, infrastructure, technologies and practices. A multi-actor and multi-layered approach is needed which brings together government, travel operators, businesses and transport users.

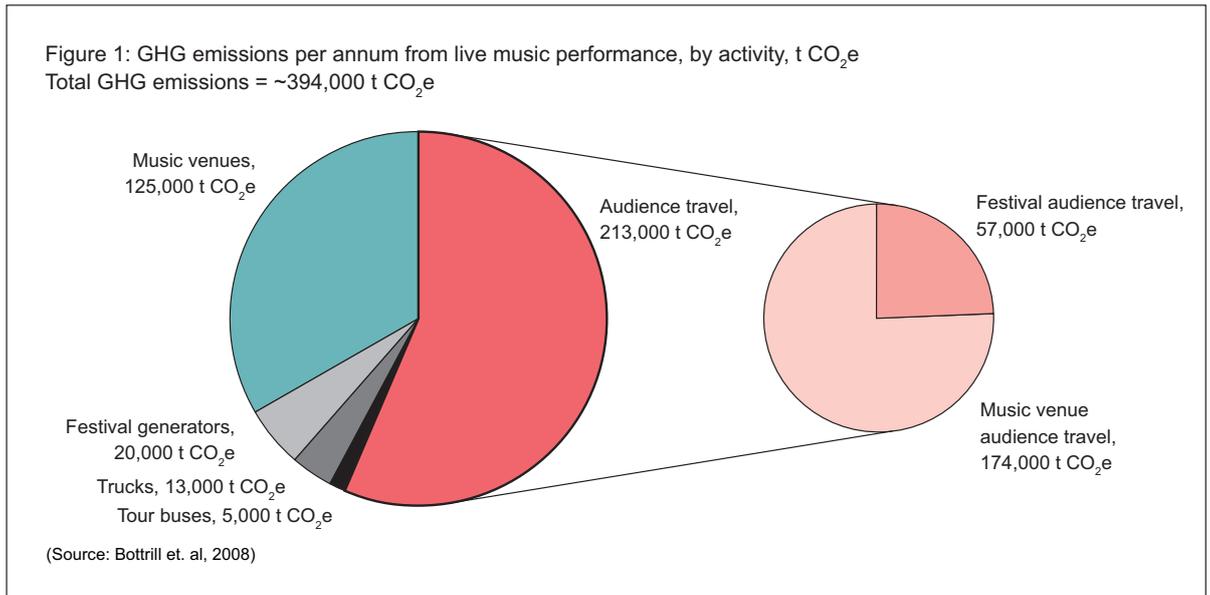
This research study investigates travel demand generated from one cultural sector, the music industry. The starting point for investigating these issues is to understand festival travel. Further research will be undertaken to examine other areas of the music industry's travel emissions (e.g. concerts and touring). It is hoped that this study will have relevance to other cultural and sporting sectors. Furthermore, it creates an opportunity for joint working so that these sectors together can have a significant impact in reducing the emissions caused by leisure travel.

1.1 Greenhouse gas emissions of audience travel

First Step: UK Music Industry Greenhouse Gas Emissions (2008) estimated the total greenhouse gas emissions of the UK music industry to be at least 540,000 t CO₂e in 2007. Of this the study estimated that 43% of the emissions are caused by audience travel to live music performances (at festivals, arenas and venues) (Bottrill et. al, 2008).

First Step concluded that, given the high proportion of emissions attributable to audience travel, the industry should prioritise climate responsibility in this area. However, these emissions are only indirectly in the control of the industry. The next stage needed to examine obstacles and opportunities and the range of actors and partners (promoters, transport operators, local and national government).

¹¹ The Climate Change Bill was introduced into Parliament on 14 November 2007 and became law on 26th November 2008.



Audience travel results in around two-thirds (c.57,000 t CO₂e) of the festival sector's emissions while festival travel is estimated to be a quarter of all music audience travel emissions (Figure 1). (Bottrill et. al., 2008).

Based on this finding Julie's Bicycle convened a small group, chaired by Melvin Benn (CEO Festival Republic) and supported by a wider constituency of promoters, to identify next steps. Research priorities were to analyse audience attitudes to festival travel, other live events, promote dialogue between operators, promoters and local authorities, and identify barriers and opportunities to reduce emissions.

As iconic events, festivals attract audiences from across the country. They are often sited out of town and not on convenient rail or bus networks which can handle significant numbers. Consequently the car is perceived as the most convenient mode of transport to these events.

Given that festivals are brief, seasonal events it is often assumed that the festival is entirely the promoter's responsibility. But promoters can only partly solve the issue of travel because the roots and thus the arising emissions lie in a complex chain of intractable obstacles to do with travel infrastructure and choices, including: lack of facilities, lack of demand, lack of audience incentives, local authority restrictions, and temporary site structures.

Despite the challenges festivals have been relatively pro-active in environmental initiatives and campaigns. Incentives which reduce both emissions and congestion are well established and include: combined coach and entrance ticket (with, in some cases, a ring-fenced proportion of tickets sold this way); car parking charges; no car parking charge for fully occupied cars; shuttle services between festival sites and train stations; promotion of travel options on festival websites and transport operators; opportunities to rent camping equipment; opportunities to buy beer cases on-site; and the option to purchase carbon offsets for travel associated emissions. In addition, an increasing number of festivals are undertaking carbon audits of their audience travel which is used to inform audience travel strategies.

Influencing audience travel requires a complex, imaginative and coordinated approach across a range of parties, taking into account transport infrastructure, audience attitudes, commercial pressures, and local concerns. Partnerships are needed between the music industry, local authorities, travel operators and non-government organisations to reduce audience travel emissions. However, crucial to developing approaches for reducing transport emissions is first to understand the attitudes and behaviours of music audiences' travel choices, which this study of UK festival audiences attempts to begin to do by providing an overview of the current situation in the festival sector.

1.2 Research aim and objectives of festival travel study

The aim of this study is to inform the UK festival sector, and other key partners, of the opportunities and challenges resulting from audience travel. The study has focused on developing a comprehensive understanding of festival goers' behaviours and attitudes towards their travel choices. The primary objectives are to describe patterns in audience travel to festivals, and to assess the attitudes of festival goers to their travel choices. The research conclusions underpin the final recommendations contained in this report.

Comparative Scenarios for audience travel

Outlined below are two audience travel scenarios:

- 1) Typical scenario: the carbon emissions resulting from audience travel using a characteristic transport modal split and average return distance travelled for a present-day large music festival.
- 2) Saving scenario: the carbon emissions resulting from audience travel if the proportion of audience going by public transport doubled and car occupancy were increased (Table I.1).

The scenarios are based on the following reasonable assumptions:

- a large festival is 40,000+ people;
- the average return distance travelled is 100 miles
- there is an average occupancy of 50 people per coach
- vehicle occupancy for average scenario is 2.5 people per car
- vehicle occupancy for saving scenario it is 3.0 people per car.

The emission factors used are consistent with Department for Environment, Food and Rural Affairs (Defra, 2008).

A maximum CO₂e reduction of 33% is possible (Table I.1) using the Saving Scenario - travelling by coach is six times more carbon efficient per person than a car with three people.

TABLE I.1 EMISSIONS SCENARIOS FOR FESTIVAL AUDIENCE TRAVEL

Scenario	Modal Split			People per Mode		
	Car	Coach	Train	Car	Coach	Train
Typical	65%	20%	15%	26,000	8,000	6,000
Saving	30%	40%	30%	12,000	16,000	12,000

Scenario	Emissions per Mode t CO ₂			Emissions per person kg CO ₂			Total Emissions t CO ₂	Savings %
	Car	Coach	Train	Car	Coach	Train		
Typical	716	35	116	28	4	19	867	-
Saving	275	69	232	23	4	19	577	33%

Case Study 1: **Blues on the Farm**, now in its 12th year, will attract 10,000 music lovers over the weekend of the 18th–21st of June. Many fans come from the Brighton area which is over an hours drive from Chichester, but the organisers are working with **The Big Lemon Bus** to provide a sustainable travel option for local visitors, and to provide wider accessibility for the festival.

Although not available nationwide, The Big Lemon Bus provides bio-diesel fuelled shuttle buses, which collect and deliver festival-goers to and from the festival site. The shuttle bus is run on 100% recycled cooking oils collected from a variety of chip shops, restaurants and hotels in Brighton & Hove area.

Their statistics from using recycled cooking oil show a 75% reduction in CO₂ emissions compared to mineral diesel, as well as demonstrating 79% less waste water and 96% less hazardous solid waste, while the diesel biodegrades four times quicker than mineral diesel.

The Big Lemon Bus not only provides an opportunity to reduce cars on the road, it has also significantly reduced its own carbon emissions, developing a friendly, affordable and environmentally-friendly bus service.

1.3 Synopsis of leisure travel and climate change research

According to a recent report by the Department of Transport, despite a growing willingness (as expressed in surveys) to sacrifice comfort for environmental goals, transport remains the least acceptable area for the public with respect to tackling climate change (Anable et al., 2006).

Several recent studies have examined the scope for significant reductions in emissions from the transport sector (Kwon, 2005; Hickman and Banister, 2007; Umweltbundesamt et al., 2000; Akerman et al., 2006). However, all conclude that technological advances alone cannot deliver the stringent targets for carbon reductions set by the UK Government and indicate the need for significant behavioural change.

In order to reduce car use it is necessary to understand underlying patterns of travel behaviour and reasons for choosing one mode of transport over another. Travel behaviour is complex and different approaches have been used to advance our knowledge of travel-decision making, including econometric models and conjoint analysis, psychological, motivational/value, information processing theory, and attitude theory (Jeng et al., 2002).

An important consideration is the complex nature of contemporary society and lifestyle which results in different travel needs (Steg, 2005; Jensen, 1999). It is convincingly argued that car use is not simply a means of getting from one place to another; the car itself, as well as car use, has a meaning in cultural and social life (Jansen, 1999). There is clear evidence that many people drive by choice rather than from necessity (Handy et al., 2005) and that motives other than instrumental functions play an important role: perceptions of power, freedom, status and superiority (Steg, 2005); and that the perceived benefits of cars depend on the lifestyle and social-spatial relations engaged by the user (Hiscock et al., 2002).

Furthermore, leisure travel is highly characterised by the use of private cars (Gronau et al., 2007; Gather et al., 2002). Anable (et al., 2005a) examined the relative importance of instrumental (such as cost and flexibility) as well as non-instrumental factors (such as stress, pleasure, control) for work and leisure journeys by different travel modes. Anable's research shows that for work journeys respondents tend to attach more importance to instrumental aspects especially convenience. For leisure journeys, however, respondents appeared to attach almost equal importance to instrumental and affective aspects, particularly flexibility, relaxation, perceived freedom, less stress, as well as convenience.

These findings suggest that strategies which aim at increasing public transport use can only be achieved with a clear understanding of travel behaviour and consumer needs and expectations (Beirao and Cabral, 2007).

Finally, the needs and expectations of travellers will vary significantly between different parts of the transport market (Anable, 2005b; Jensen, 1999). Different users will evaluate the same service differently and responses will be influenced by different service attributes (Beirao et al., 2007; Andreassen, 1995).

Usually the market is segmented according to socio-demographic variables and transport use (car users and public transport users) (Beirao and Cabral, 2007). However, Anable (2005b) has suggested that commonly used classifications may be oversimplifying the structure of the market, indicating the need for a careful identification of new segments of users each with varying degrees of mode-switching potential, according to a unique combination of underlying psychological constraints, perceptions and attitudes.

Such research indicates that different groups have different needs and are motivated by different factors; therefore they need to be serviced in different ways in order to optimise the chance of influencing mode choice behaviour. As Beirao and Cabral (2007:488) notice: "There is a need to identify the primary reasons for not using public transport and, if possible, remove potential barriers to public transport usage".

*Case Study 2: **Burning Man Festival** takes place in a location called 'the Playa' in the US and features community art and entertainment. The Festival has the 'Leave No Trace' tagline, and provides in-depth information focusing on sustainable and environmentally-friendly transport options to the event.*

The festival has created a community board to enable lift share between its ticket holders, and encourages people who drive to consider the option of purchasing or renting an electric or hybrid cars. Those who travel via train or bus also have the option of joining the Burn Clean Project, where a cost of \$55-\$65 covers and reserves a one way ride on a biobus shuttle. They also include more information regarding walking and cycling.

The event has a strong reputation on environmentally-friendly and green options, and because of this the event exerts significant influence on festival-goers to travel to the event in the most sustainable way possible.

Section 2: Festival Audience Travel Research Study

Festivals across the United Kingdom and Ireland participated in this study, commissioned by Julie's Bicycle and delivered in partnership with the Environmental Change Institute, University of Oxford, Surrey University, Festival Republic, Live Nation and a team of volunteers from Buckinghamshire New University. All the contributing promoters donated tickets and incentives to the volunteer teams.

This section outlines the characteristics of the festivals participating in the study, what information was gathered, and how the data was analysed.

2.1 Characteristics of festivals participating in the study

Information was gathered from 14 festivals taking place in the summer of 2008 (Table 2.1). The participating festivals are representative of major (more than 60,000 people) and large (between 20,000 to 60,000 people) festivals. Eight of the 14 festivals are categorised as major festivals, five are large and one is medium (between 5,000 to 20,000 people). Together these 14 festivals have an approximate total audience size of 914,000, which accounts for almost a fifth of annual ticket sales to festivals.

The festival sample was a geographically spread across the UK and included the largest festivals in England (Glastonbury), Ireland (Oxegen), and Scotland (T in the Park).

There was a proportionate mix of festivals in each location category of urban (the centre of a town or city), peri-urban (on the periphery of a town or city, but within 15 minute walk to public transport) and greenfield (in the countryside & more than a 15 minute walk to public transport).

Of the 14 festivals three were in urban locations, six were in peri-urban locations and 5 were in greenfield locations. Related to site location is proximity to public transport networks: each festival surveyed was further categorised according to its proximity to public transport networks:

- high (immediately close to national railway network),
- medium (a short shuttle journey from a national/regional railway station)
- low (the closest railway station is a local line).

Most of the festivals surveyed were multi-day events for which the majority of festival goers will be camping for 2–3 nights. The one-day events were those located in urban locations.

This first cross-festival audience travel research study did not gather data from smaller festivals (less than 5,000 people), but recommendations include extending the research to smaller events.

*Case Study 3: **Coachella Festival** is one of the most popular festivals in the US, and in previous years has organised what was affectionately titled 'The Coachella Express'. Organisers erected a temporary platform at the small town of Indio which is the closest train station to the festival, and ran the Express train from downtown Los Angeles to Indio.*

The Coachella Express was much more than simply a group transport option: for the price of the ticket the festival-goer was entertained by on board DJs, and given gifts including free t-shirts, ice cream and VIP passes. The Forum community on Coachella's official website shows this initiative proved to be a hit, and many are hoping to see it return.

TABLE 2.1 CHARACTERISTICS OF FESTIVALS PARTICIPATING IN THE STUDY

Festival Name	Total Ticket Sales	Size	Length	Site Location	Nearest Urban Centre	Public Transport Proximity
Cambridge Folk	14,000	Medium	Multiple	Peri-urban	Cambridge	Medium
Download	48,000	Large	Multiple	Peri-urban	Donnington	Medium
Glastonbury	138,500	Major	Multiple	Greenfield	Pilton	Low
Global Gathering	35,000	Large	Multiple	Peri-urban	Stratford-upon-Avon	Medium
Hyde Park – Hard Rock Calling	58,000	Large	Day	Urban	London	High
Hyde Park – Mandela	28,000	Large	Day	Urban	London	High
Latitude	25,000	Large	Multiple	Greenfield	Southwold	Low
Leeds	70,000	Major	Multiple	Greenfield	Leeds	Medium
Wireless Shows	86,000	Major	Day	Urban	London	High
Oxegen	80,000	Major	Multiple	Peri-urban	Dublin	Medium
Reading	85,000	Major	Multiple	Peri-urban	Reading	High
T in the Park	82,000	Major	Multiple	Peri-urban	Edinburgh	Medium
V Festival Chelmsford	80,000	Major	Multiple	Greenfield	Chelmsford	Medium
V Festival Staffordshire	85,000	Major	Multiple	Greenfield	Birmingham	Medium
Total Surveyed Festival Popn.	914,500					

2.2 Data gathering

Five sources of data were gathered and analysed for the study (Table 2.2). These were:

- analysis of car occupancy rates of at least 1,700 cars for 8 festivals
- geo-location analysis of distance travelled by festival goers using ticket mailing locations information from 4 festivals
- festival goer attitudinal survey completed by more than 1,200 people
- coach traveller attitudinal survey completed by more than 1000 people
- promoter survey completed by 13 festival organisers.

The datasets provide a rich empirical evidence base from which to infer audience travel patterns and the travel attitudes of the festival going population. It was not possible to undertake each of these surveys at all festivals in the sample; however, as will be seen the sample size for each survey was sufficiently large for robust statistical analysis.

Survey templates can be found in Appendix III of this report.

*Case Study 4: **Download Festival** is one of the largest rock and metal festivals located in Donington Park, Derby. Produced by Live Nation, they provide a variety of sustainable and transport options for both weekend and day ticket holders.*

Besides the option of public transport and free shuttle buses to and from local train stations, Live Nation have created a new incentive for visitors which aims to increase car occupancy levels. When ticketholders arrange a lift share of 4 or more people they can enter a competition for upgraded VIP passes.

Once on site, festival-goers complete a competition form and drop them off at campsite hubs. The competition is open to people using liftshare websites and those who created their own lift share with friends.

TABLE 2.2 SURVEYS RUN AT EACH FESTIVAL

Festival Name	Data Collection Gathered at each Festival				
	Car Occupancy	Geo-Location Analysis	All Festival Goer Attitudinal	Coach Goer Attitudinal	Promoter
Cambridge Folk			Y		Y
Download	Y				Y
Glastonbury	Y	Y	Y (pilot)		Y
Global Gathering	Y		Y		
Hard Rock Calling			Y		Y
Hyde Park - Mandela			Y		Y
Latitude	Y	Y	Y		Y
Leeds	Y	Y	Y	Y	Y
Wireless Shows			Y		Y
Oxegen	Y		Y		Y
Reading	Y	Y	Y	Y	Y
T in the Park	Y		Y		Y
V Festival Chelmsford	Y		Y	Y	Y
V Festival Staffordshire			Y	Y	Y

2.2.1 Promoter survey

The promoter survey was for completion by festivals that had undertaken at least one of the other surveys. The purpose of this survey was to collect information on total ticket sales; transport mode splits of their festival goer population; incentives and disincentives for encouraging lift-sharing (between friends or organised schemes) and public transport use; and opinions on festival sector cooperation and strategies to reduce audience travel greenhouse gas emissions. This survey of open-ended questions was self-completed by all but one of the 14 festivals participating in the study (Table 2.2 & Appendix IV: Research Survey Templates).

2.2.2 Car occupancy survey

This survey was a simple and effective means of gathering good data on car occupancy. The aim was to calculate the average occupancy of cars driving to the festival and to determine the proportion of cars carrying 1, 2, 3, 4 and 5+ people. The data was used to identify the scope for increasing occupancy numbers per vehicle.

This survey was run at eight festivals (Table 2.2). A team of volunteers was positioned at each of the main gates into the festival site tabulating the number of people per car during all peak-hours for arrivals. The average number of cars tabulated per festival was 1,700, which represents a sufficiently large sample size to build an accurate estimate of occupancy levels per car.

The survey data cannot determine the occupancy rates, as this would require also collecting data about the maximum capacity per car.

2.2.3 Geo-location analysis

The geo-location analysis examined the distance travelled by festival goers to attend a festival. It provides useful information on the distribution of distances travelled by festival goers to the festival site. Geo-location analysis uses the postcode of where tickets are mailed and then calculates the road distance of this address from the festival site.

The analysis assumes that where a ticket is mailed is also where the festival goer is travelling from. This may not always be correct (for example, one person may organise the ticket purchase on behalf of others).

Geo-location analysis was conducted for four festivals (three greenfield and one peri-urban) from our sample of 14 (Table 2.2). This data was provided by Festival Republic.

2.2.4 All festival goer attitudinal survey

The all festival goer attitudinal survey formed the core dataset for this study. The aim of this survey was to gain an understanding of travel patterns as well as attitudes to public transport and lift-share schemes. The survey was run at 12 of the 14 festivals participating in the study (Table 2.2) and piloted at Glastonbury Festival.

This quantitative survey was a structured multiple choice questionnaire (Appendix IV: Research Survey Templates). There were eight sections:

- 1) mode and distance travelled by respondent
- 2) car travellers only – more detail on travel decisions of respondent
- 3) public transport travellers only – more detail on travel decisions of respondent
- 4) use of festival and travel website in planning travel
- 5) respondents opinion to organised liftshare schemes
- 6) attitudes to using public transport
- 7) attitudes to carbon responsibility for emissions created by audience travel
- 8) background demographic questions.

For the attitudinal survey we wanted to capture a sample that was as representative of the festival going population as possible. Selection was by interviewers inviting festival goers to participate in the study. Interviewers recruited people into the survey by walking through campsites, central thoroughfares (i.e. where vendors selling food and merchandise are located) and entrance gates. We wanted all festival goers attending the festival to have a chance of being recruited into the survey and we did not bias selection into the survey by transport mode, gender or age.

The survey was administered face-to-face by teams of interviewers. The interviewers either asked the questions directly to the respondent or were present whilst the respondent self-completed the questionnaire. The questionnaire took approximately 10 minutes per respondent to complete.

At least 100 questionnaires per festival were completed at six festivals and a further three festivals fell just short of this target. The three festivals with substantially less than 100 completed questionnaires have been used to inform findings but have not been used in the statistical analysis; significant inaccuracies could have resulted had we aggregated the results.

The total number of completed general attitudinal surveys was more than 1,300, which represents a robust dataset for study.

2.2.5 Coach goer attitudinal survey

The purpose of this survey was to get richer information on the experience and attitudes of coach goers. Coach travel has a relatively low emission profile per festival goer and it is a logistically feasible public transport option from urban areas to greenfield festival sites.

The coach goer attitudinal survey was sent to those attending V Festival and Reading/Leeds weekend festivals (Table 2.2, Appendix IV: Research Survey Templates). The coach goer attitudinal surveys were based on the all festival goer survey and created in online format so they could be emailed to coach goers and self-completed electronically.

The ticket sales database was used for identifying coach travellers. For each festival approximately 1,500 people were randomly selected and emailed. Entry to a prize draw for 2 tickets to each of next year's festival was offered to those completing the survey. In all over 1,000 coach travellers completed the online survey which provided a good sample size for statistical analysis.¹²

¹² There was a very small risk of double counting in that a coach goer may have completed the survey onsite at the festival and then online. However, given the small numbers of coach goers recruited on-site the chance this would have created problems in the analysis was minimal.

2.3 Statistical Analysis of Attitudinal Surveys

Tests of statistical significance were all conducted at the 95% confidence level ($\alpha = 0.05$), which means that we can be 95% confident that the interval estimates are correct. Since most variables were measured at the nominal and ordinal level, the chi-square was the most common test applied. Where appropriate, for some ordinal level variables the analysis of variance (ANOVA test) was also applied, and in some rare cases the student's t-test. In order to examine information about the strength and direction of the relationships between variables, depending on the significance test applied, different measures of association were also estimated: Phi (ϕ), Cramer's V, and gamma (G). Interpretations of the strength of the relationships were based on Healey (2007).

Because data was collected from different festivals across the UK and then aggregated to represent a single sample of the festival goer population, proportions in the overall sample may not coincide with proportions (of each festival) in the population. Within statistics, weighting is used to correct disproportional sample sizes and adjust the collected data to represent the population from which the sample was drawn. To adjust such distortion within a sample, every case (every asked person) is assigned a weighting factor (w_k), by which the corresponding data is multiplied. This factor is determined by the proportion of the respective group or stratum (festival in our case) in the population divided by the proportion of that group or stratum in the sample (the inverse of the sample fraction in each group): $w_k = (N_k/N) / (n_k/n)$ [Weighting factor = % in population / % in sample].

Nevertheless, some limitations in data analysis as a result of aggregation still persist, mostly due to inherent variations between festivals. For example, festivals were characterised by different size, length, site location, proximity to public transport, and some to different music categories. All these differences combined might produce quite diverse festival types which in turn might affect respondents' attitudes towards transport modes. Thus, aggregated results should be treated with some caution; while they might reflect overall trends in the music festival sector, they are not necessarily representative of each individual festival. However, the categorisation of the festivals helped to detect some of these differences in running the significance tests, especially between urban, peri-urban and greenfield festivals.

*Case Study 5: Keeping passengers entertained for the long journey between their home town and festival destination can be tough, but **Festivalbus** journeys go that extra mile for coach travel to festivals in Europe. On board is non-stop music and a Festivalbus representative, ensuring everyone is kept happy and prepared for the festival ahead, or the home stretch. Working with festivals such as Lowlands Festival (Netherlands), Pukkelpop (Belgium) and Summerjam (Germany), they provide a bright and lively atmosphere on board, reducing traveller stress by pulling right up to the entrance of the festival, instead of at nearby train stations or shuttle bus stops.*

Carrying coach loads of 50 people at a time reduces the amount of cars on the road at these larger festivals, decreasing the emissions profile of audience travel to these large scale events. Festival goer testimonials attest to the success of Festivalbus in making public transport the party option!

*Case Study 6: **Glade Festival** has traditionally kept its location a secret until the last possible moment, however for 2009, they have located to the Matterley Bowl in Winchester. Alongside this, they are working with the **Big Green Coach** company to create routes running from several major cities to the festival, with combination coach and weekend tickets. After a trial run in 2008, Glade managed to sell 400 tickets for the Big Green Coaches, and is looking to increase this in 2009. The festival discourages bringing cars containing 2 or less people by charging £8 for car parking, however make it free for lift sharing groups of 3 or more. Their biggest impact on carbon emissions is via train travel and shuttle buses, which 25% of ticket holders take advantage of.*

Big Green Coach emphasise to visitors and ticket holders that group coach travel is one of the most effective ways for them to reduce their carbon footprint to a live event, and are also currently working on some ideas to create more sustainable routes and buses to improve their service. The name and the branded green buses automatically provide reassurance that it is a more environmentally-friendly option, and by taking cars off the roads, they are reducing congestion and carbon emissions. Travelling by coach is almost 7.8 times more carbon efficient than travelling in a car with two people, with 22g CO₂ / passenger mile.

Section 3: Research Findings

This section presents the findings from each of the data sources and collates them to provide an overview of both promoters' action to reduce audience travel emissions and audience travel behaviour and attitudes.

3.1 Findings of Promoters Survey

The findings of the promoter survey, completed by 13 festivals (and seven promoter companies), indicate that there is considerable scope for festival promoters to take a more active role in addressing emissions from audience travel. For example, ten festivals were currently designing or had an ongoing travel strategy for managing and reducing emissions from audience travel.

However:

- Only one festival said they offered specific incentives for use of public transport, such as discounts on transport ticket, ability to rent camping gear at low cost onsite, or different kinds of vouchers. Most promoters limited themselves to providing information about public transport options.
- Only four festivals are charging for car parking, with only one charging more than £10 per vehicle.
- Five festivals have audited the greenhouse gas emissions generated from their festival
- Three offered festival-goers the option of carbon offsetting their travel – this was either done voluntarily by the individual festival-goer when purchasing their entrance ticket or on their behalf as the promoter offsets all emissions associated with the festival.

Table 3.1 is a compilation of all the travel information, incentives and disincentives that each of the festivals participating in the study give their festival goers. Most festivals provide some level of information for all main travel modes. The key incentives for encouraging car lift-sharing or public transport included: bike racks, (high) car parking charges, train ticket savings, good public transport links, shuttle bus between station and festival site and free car parking for full car. Notable disincentives for encouraging public transport use included: poor pedestrian access to site, car parking inclusive with festival entry ticket, and a shuttle bus service from car park to festival site.

Examples of best practice for addressing audience travel emissions (explicitly or implicitly) are outlined in Appendix II – furthermore a forthcoming (late 2009) book by co-author Meegan Jones on sustainable event management covering all aspects of organising an event to minimise the environmental impacts has a dedicated chapter on travel. This practical guide gives clear information and recommendations for developing systematic approaches to addressing the environmental impacts of audience travel to events.

*Case Study 7: **Latitude Festival**, produced by Festival Republic, is located in the scenic landscapes of Henham Park, Suffolk. Far away from most direct public transport links, and not near a city centre, Festival Republic provide extensive information and ideas to enable festival-goers to access the event.*

The website has been designed with utmost user efficiency in mind, whilst separate sections provide up to date information and encourage the use of public transport and initiatives run by the organisers. It also promotes Lift Share, with links to the external website, and has a section dedicated to Eco Travel within their 'Green' Section on the website, with statistics and explanations as to the impact of audience travel on the environment.

TABLE 3.1 TRAVEL INFORMATION, INCENTIVES AND DISINCENTIVES GIVEN TO FESTIVAL GOERS

Festival Name	Local buses National buses Trains Private vehicles Festival shuttles Lift shares Walking / Cycle								Incentivising	Dis-incentivising
Cambridge Folk www.cambridgefolkfestival.co.uk	✓	✓	✓	✓	✓	✓	✓	✓	Covered Bike Racks Some free buses from nearby Roadworks on busy main road (discourages driving)	Roadworks on busy main road Tickets include Car Parking Free shuttle from Car Park to Site
Download www.downloadfestival.co.uk	✓	✓	✓	✓	✓	✓	✓	✓	Festival Upgrade with Liftshare Car Park - Additional Cost	Coach Tickets - Additional Cost
Glastonbury www.glastonburyfestivals.co.uk	✓	✓	✓	✓	✓	✓	✓	✓	Rail & Ride Link Free Free Bicycle & Property Lockups Car Park - Additional Cost Caravans - Additional Cost	See Coaches - Additional Cost
Global Gathering www.globalgathering.co.uk	✓		✓	✓			✓			Free Car Park
Hyde Park, Hard Rock Calling www.hardrockcalling.co.uk	✓		✓						Easy to get to with lots of public transport options Not a camping festival - no need to carry large amounts of gear No nearby cheap car parks	
Hyde Park, Mandela www.46664.co.uk/136/venue	✓		✓						Easy to get to with lots of public transport options Not a camping festival - no need to carry large amounts of gear No nearby cheap car parks	
Latitude www.latitudefestival.co.uk	✓	✓	✓	✓	✓	✓	✓	✓	Save money with booking train tickets in advance or with combo rail and coach tickets. Free Bike Racks	Have to pay additionally for shuttle buses Anglian Coaches do not let cycles onto their services. No pedestrian access to walk. Lack of late night public transport. Car Parking included in ticket
Leeds www.leedsfestival.com	✓	✓	✓	✓	✓	✓	✓	✓		No pedestrian access to walk. Shuttle Bus - additional cost Car Parking is included in ticket
Wireless Festival www.wirelessfestival.co.uk	✓		✓						Easy to get to with lots of public transport options. Not a camping festival - no need to carry large amounts of gear No nearby cheap car parks	
Oxegen www.oxegen.ie	✓		✓	✓	✓				Shuttle Bus from Park & Ride is Free Shuttle Buses from Site Priority to buses on festival site Free Car Parking when buying 4 or more tickets (encourage carpool)	Coach - additional Cost Park & Ride Car Park Cost
Reading www.readingfestival.co.uk	✓	✓	✓	✓	✓	✓	✓	✓	Can buy combo See tickets and coach tickets Rail & PlusBus reduced fares when buying combo ticket Shuttle Boats are free 20 Min Walk from Main Station Car Park - Additional Cost Car Parks - far away from main site Caravans - Additional Cost	Drop Off & Pick Up Points far away Shuttle Bus - additional cost
T in the Park www.tinthePark.com	✓	✓	✓	✓	✓	✓	✓	✓*	Combo tickets cheaper advance Car Park - Additional Cost Car Park - only advance tickets	Coach - additional cost
V Festival Chelmsford www.vfestival.com		✓	✓	✓	✓				Combo tickets with Big Green Coaches cheaper than separate And See Tickets Combos	Additional cost for Shuttle Bus Car Park is free/included in ticket Caravans are free
V Festival Staffordshire www.vfestival.com		✓	✓	✓	✓			✓	Combo tickets with See and Big Green Coaches cheaper than buying separates.	Additional cost for Shuttle Bus Additional cost for car park

*Walking Only

When the promoters were asked what they foresaw as the issues in increasing public transport uptake by festival goers their responses mainly related to:

- a. the comparatively lower cost in many cases of travelling to the festival by car
- b. the perceived lack of convenience and comfort compared to coming by car
- c. the logistics of bringing camping equipment on public transport
- d. limited ability to make requirements on festival goers because there is no obvious commercial rationale

Public transport options are often communicated to audiences when they purchase their festival tickets which can be months in advance of when they typically plan their journeys. In addition, people often try to co-ordinate travel with friends so need travel options which allow some flexibility.

In order to increase public transport uptake by festival goers, some measures considered to be more effective were:

- a. offering a free or subsidised public transport service
- b. promoting more urban based festivals
- c. allocating a proportion of entrance tickets to be combined with public transport tickets
- d. car parking charges and reductions for full cars
- e. offering camping rentals
- f. selling supplies on-site.

Festival organisers also identified the critical issue of who should bear the commercial cost of providing these incentives and how costs can be jointly shared.

The promoters were asked what issues they foresaw in promoting organised car lift-share schemes:

- promoters are very wary of promoting organised car lift-share schemes given the serious risk to their reputation should a festival goer be put in danger or harmed when participating in these schemes. Promoters seem willing to make information available to festival goers on their website, but are unlikely to do much further promotion of these schemes given the risk and liability;
- difficult for festival goers to organise;
- inconvenience to festival-goers;
- limited potential because many cars have already high occupancy rate;
- ensuring a clear chain of responsibility back to the organisation that coordinated the liftshare;
- promote safety messages / more regulation to minimise the elements of risk.

Given the difficulty of actively promoting organised lift-share schemes many promoters considered it more effective for them to encourage people to lift-share with people they already know via:

- more information and campaigning;
- creating incentives, such as no car parking charges for full cars.

The survey asked promoters for their views on whether they thought setting industry-wide targets for reducing emissions would be helpful. Most promoters agreed this could be helpful, but raised the following issues:

- the need for solid data on audience travel upon which to base the targets;
- the possibility of this being a token response and not delivering action;
- that it would be more useful to raise awareness of the issue within the industry and to festival goers;
- there is hesitation about promoting the targets publicly.

Finally, most promoters were interested in festival transport guidelines/best practice being made available to all festivals. It would be challenging to make these guidelines relevant to every festival given the diversity of events.

Case Study 8: Liftsharing is becoming more popular with festival goers, as more and more festivals provide some form of incentive to increase car occupancy levels, such as a reduced car parking charge for a full car, or even competitions to win upgrades when travelling to the festival in a full car.

Liftshare.com and Freewheelers.com are two online communities which help to match up similar journeys to create car pools. The schemes operate nationally, with specific groupings emerging around particular festival events – the online community forums help to build up hype around a festival or event and a substantial number of festivals provide direct links to these sites. The sites are increasing in popularity: Liftshare.com has approximately 320,000 individuals registered at the time of writing.

While these schemes offer the chance to save money, they also save carbon: having three people in a car is the third most sustainable method of travel, behind coach travel and train, at 115g CO₂ / passenger mile. A car with 1 person is a staggering 345g CO₂ / passenger mile.

Summary findings of promoters survey

From the promoter survey we found:

- Most promoter incentives for encouraging festival goers to use public transport services are limited to providing information via the festival website or when sending out festival entrance tickets.
- More than half of those participating in this study have or are conducting carbon audits to estimate the greenhouse gas emissions resulting from audience travel to their festivals. The information from these audits is used to inform the development of a transport strategy.
- The main barriers festival organisers foresee in getting festival goers to use public transport are: the perceived lack of convenience and comfort; the logistics of bringing camping equipment on public transport; limited ability to place requirements on festival goers owing to a lack of commercial rationale.
- Festival promoters thought the most effective measures for increasing the uptake of public transport to festivals were: offering a free or subsidised public transport service; promoting more urban-based festivals; allocating a proportion of entrance tickets to be combined with public transport tickets; car parking charges and reductions for full cars, and offering camping rentals and selling supplies on-site.
- Festival organisers thought that an industry-wide strategy for addressing audience travel emissions could be useful. However, if industry travel reduction targets were developed they had reservations about the reliability of the data underpinning these targets or that it would be perceived as merely a token response.
- Festival organisers thought there is value in raising awareness of the issue both within the industry as well as communicating more effectively to their audience.

3.2 Findings of the all festival goer attitudinal survey, car occupancy rates survey & geo-location analysis

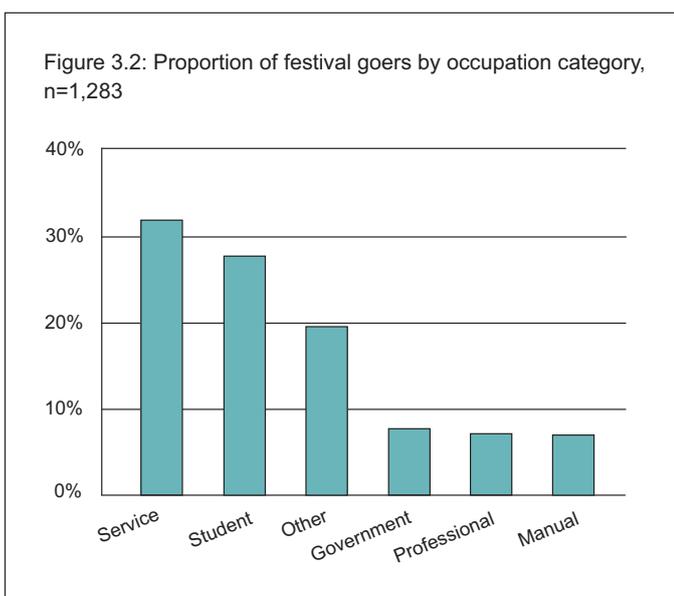
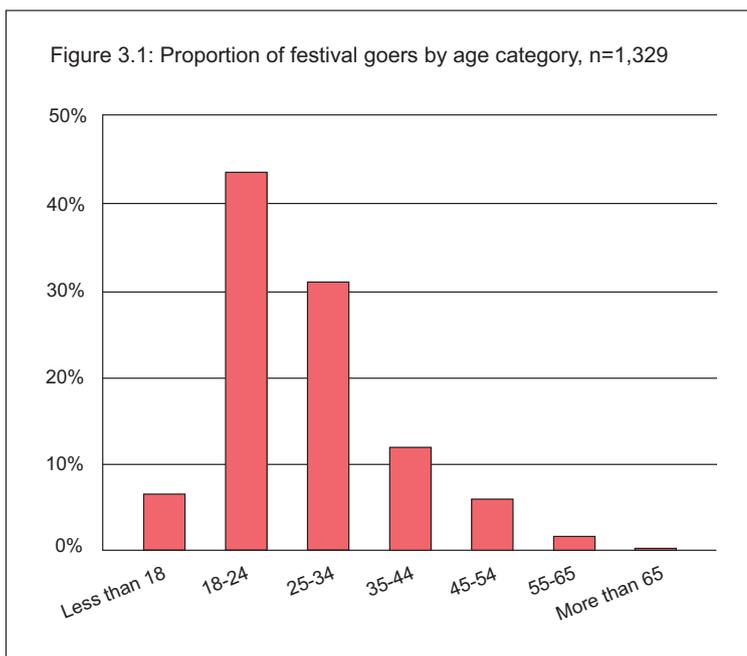
3.2.1 Socio-demographics

Of those surveyed in the all festival goer attitudinal survey just over half were male (55.7% ± 2.7%, n=1,278). Over a third of festival goers surveyed were between 18 and 24 years old (43.2% ± 2.7%, n=1,329) and the majority were below 35 years old (80.6% ± 2.7%, n=1,329) (Figure 3.1).

We categorised the occupation of festival goers into – government (i.e. civil servants and teachers), service providers (i.e. retail and administrators) professional (i.e. doctors, engineers, and architects), manual (i.e. electricians and builders), student and other (i.e. retirees, charity workers and researchers). The largest occupation groupings were service providers (31.5% ± 2.7%, n=1,283) and students (27.4% ± 2.7%, n=1,283) (Figure 3.2).

Case Study 9: Peats Ridge Festival in Australia offers a raft of initiatives to encourage more festival goers to bike to the event. A complimentary luggage pick-up and drop-off service from Central Station and Hawkesbury River Station can be pre-booked via Peats Ridge's Sustainability team. Cyclists can then travel stress and luggage-free to the site. In previous years Peats Ridge has also offered a campsite specifically for cyclists, reducing the pressure to make it in time for a 'good position', and organised a 'bike bus' encouraging cyclists to the festival to ride together in a group with a support vehicle and ride guide.

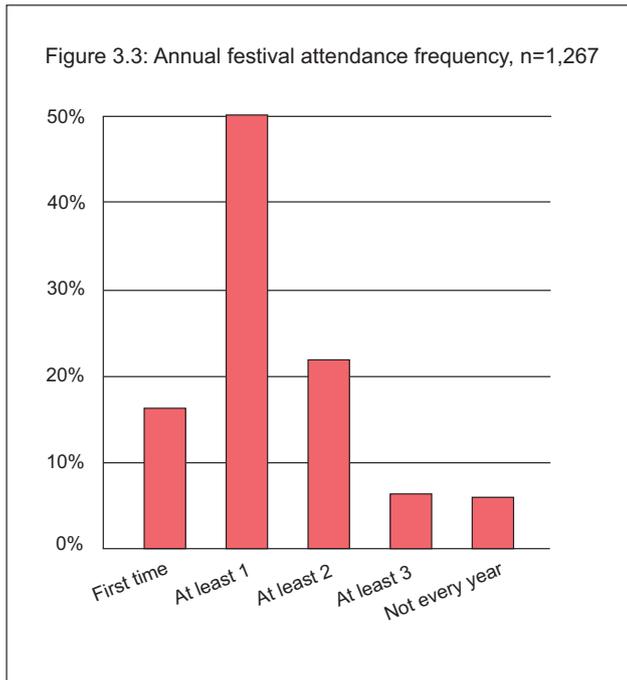
Peats Ridge also charge for car parking on site, with these profits being re-invested into their public transport schemes, such as shuttle buses.



Over half of those surveyed had been to the festival before ($56.7\% \pm 2.7\%$, $n=1,313$) and the majority of festival goers said they were likely or very likely to attend again ($81.6\% \pm 2.7\%$, $n=1,294$) (Figure 3.3). Furthermore we found that three-quarters of festival goers said they attend at least one festival per year ($78.1\% \pm 2.7\%$, $n=1,267$).

Case Study 10: PickupPal is a North American initiative with a global presence that creates a community forum to link up similar business and leisure journeys across the US and worldwide. **Vans Warped Tour** promotes the use of PickupPal on their website, providing links to the website and promoting the use of lift sharing with other people to reduce carbon emissions and save some money doing it. PickupPal has also worked with the likes of Dave Matthews Band, The Dead tour, Phish, John Mayer, AEG Live Events (including Coachella) as well as previously working with UK Festivals such as Reading, Leeds and Latitude, and non-profits such as Alzheimers Society, AIDSWalk, WWF and Clean Air Foundation.

PickupPal is one of the first organisations in the US to pioneer the scheme, and is definitely the largest, with 133,000 registered active users, and growing. Lift sharing to large tours and events such as Vans Warped Tour, which consists of approximately 50 tour dates nationwide, is growing more popular as a cheaper alternative to driving.



Summary findings of socio-demographic information

Our sample of the festival going population had the following characteristics:

- More than half were male (55.7%).
- The majority of the population (80.6%) were aged less than 35 years old; of that half (43.2%) were aged between 18–24 years old.
- The two largest occupational groups were service sector workers (31.5%) and students (27.4%).
- More than half (56.7%) had been to a festival before and many would like to attend the festival again (81.6%).

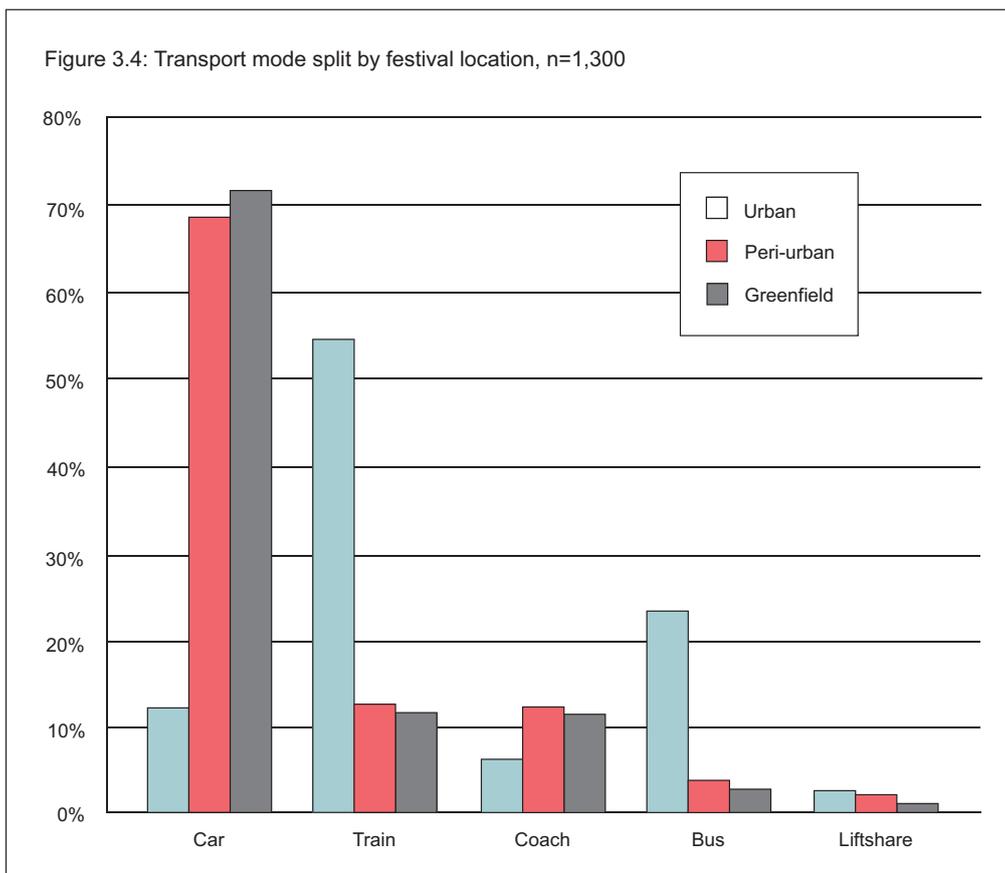
3.2.2 Audience travel patterns & option awareness

Almost three-quarters of festival goers attending either greenfield (72.3% ± 2.7%, n=1,300) or peri-urban (68.4%) festivals travel by car, which is significantly greater than the number of festival goers going by car to urban festivals (12.7%) (Figure 3.4). Unsurprisingly, there is a strong relationship between the mode of transport chosen by festival goers and the location of the festival they are attending.

For peri-urban and greenfield festivals the survey found that almost a quarter of festival goers (23.6%) came by public transport (i.e. coach & train with shuttle bus). The proportional split between these two options was fairly even.

The train was the most popular mode of transport for urban festival goers (54.9% ± 2.7%, n=158). Two influencing factors are that urban festivals:

- have good access to public transport services,
- are typically one-day music events, therefore people have no need to travel with luggage and camping gear.



3.2.3 Average distances travelled

The geo-location analysis of the four major and large festivals found that the average one-way distance travelled by festival goers ranged from a minimum average of 70 miles to a maximum average of 140 miles. The distribution pattern in the distance travelled by festival goers varies festival-to-festival depending on the popularity and location of the festival relative to where the festival goer lives.

Two of the festivals examined are located relatively close to major urban areas and for these festivals it was found that three-quarters (77%) of festival goers had travelled from 100 or less miles away. The other two festivals were in rural greenfield locations and only a quarter (25%) to a third (35%) of festival goers travelled from 100 or less miles away. Furthermore, two more rural greenfield festivals had a much higher proportion of their audience travelling from 200 or more miles away (1 in 5 people (16%-20%)) compared to the two festivals located nearer the urban areas (1 in 20 people (5%)).

3.2.4 Number of festivals attended annually and transport mode

Close to a fifth (16.8% \pm 2.9%, n=1267) of first-time festival goers attending a peri-urban or greenfield festival travelled by coach. This is a higher proportion than those festival goers who typically attend one or two festivals annually, as only a tenth of them travelled by coach. This may be an indication that first time festival goers are more responsive to public transport use compared to regular festival goers that have more fixed attitudes and behaviours.

3.2.5 Awareness of public transport modes

Approximately half of greenfield and peri-urban festival goers were not aware of coach and train services to and from the festival site (55.2% and 47.4% respectively, standard deviation $\pm 2.7\%$, n = 1203) (Table 3.2). In the case of urban festivals nearly all festival goers (89%) were aware of the train, as it is most frequently noted by respondents as a transport option.

TABLE 3.2 AWARENESS OF PUBLIC TRANSPORT OPTIONS

Transport mode	Greenfield/Peri-Urban Festivals	Urban Festivals
Car	78.2%	57.5%
Lift Share Schemes	25.8 %	4.7%
Coach	55.2%	31.0%
Local Bus	29.0%	50.0%
Train	47.4%	89.0%
Not sure	3.3%	7.1%
Sample size (n)	1203	158

3.2.6 Car Travellers – Awareness of public transport options

Festival goers with the highest percentage of awareness of public transport options seem to be car travellers (58.3% for coach, 40.4% for local bus, and 43% for train, (standard deviation $\pm 2.7\%$, n = 1300)), although this statistic is due to the predominance of car as a transport mode overall.

Compared to non car travellers, festival goers that travelled by car score well in their awareness of coach as a travel option (51.9%) compared to train travellers (38.5%), while they score fairly equally with coach travellers on their awareness of train as a transport option. Car travellers score equally to coach travellers in their awareness of local bus facilities, while they fall behind train travellers (Table 3.3). These differences were all found to be statistically significant with a 95% confidence, revealing a strong association (Phi values > 0.3) between transport mode and awareness of public transport options according to the patterns described above.

TABLE 3.3 AWARENESS OF PUBLIC TRANSPORT OPTIONS BY MODE USE

Transport Mode	Awareness of PT options		
	Coach	Train	Local Bus
Car travellers	51.9%	45.5%	25.1%
Coach travellers	N/A	49.5%	24.1%
Train travellers	38.5%	N/A	41.3%

Across all festivals surveyed, official lift-share schemes had the lowest levels of awareness. Car drivers seem to be slightly more aware: a quarter of them (26.3%) were aware of car lift share schemes, compared to 21.3% of coach and 24.3% of train travellers. However, the majority of car drivers (3 in 4) are still unaware of the existence of car lift-share schemes as a transport option to the festivals. Furthermore, the survey found car drivers are also resistant to participating in a lift-share scheme either to offer, or to ask for, lifts.

Summary findings of audience travel patterns & option awareness

From the general attitudinal survey we found:

- Three-quarters of those going to a greenfield or peri-urban festival travelled by car (72.3% and 68.4% respectively). The remaining proportion was fairly evenly split between coach and train travellers.
- Train was the favoured mode of travel for those attending an urban festival (54.9%).
- Approximately half of greenfield and peri-urban festival goers were not aware of the availability of coach (55.2%) and train (47.4%) services. The car lift-share schemes had the lowest level of awareness (25.8%).

From the geo-location analysis we found:

- The average one-way distance festival goers travelled ranged from 70 miles to 140 miles depending on proximity to an urban area. For festivals located near major urban areas three-quarters (77%) of festival goers come from within a 100 mile radius whereas for more rural festivals just a quarter (25%) to a third (35%) come from within a 100 mile radius.

3.2.7 Car travellers – People per car

The results of the car occupancy survey undertaken at eight festivals found that the average number of people per car ranged from a minimum of 2.36 to maximum of 2.77 persons with an overall festival sector average of 2.6 (Table 3.4). We found there was no substantial variation in average number of people per vehicle between festivals, therefore we can infer that a festival's location will have little bearing on the number of people travelling per car.

The proportion of one-person cars was in the order of 10% of the cars. There was one festival (#5. Greenfield, Table 3.4) for which 27% of the cars had only one person. Anecdotally, it is thought the reason for this was that these festival goers were coming straight from work and then joining companions able to travel to site earlier in the day.

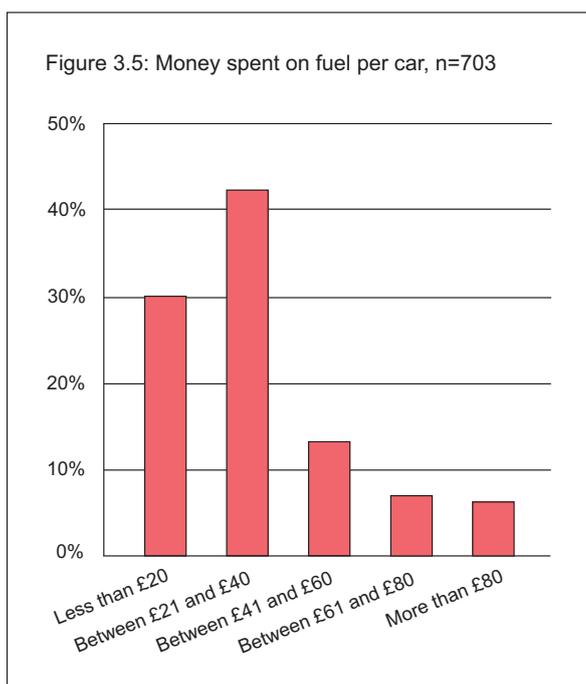
The major overall finding of the occupancy survey is that upwards of 60% of cars are travelling to festivals with two or less people. There is scope for reducing the number of cars by increasing car occupancy rates. However, to reduce carbon emissions the increased car occupancy must be focused on those festival goers that would still be going by car. Therefore, efforts to increase occupancy rates must be done in the context of a comprehensive audience travel strategy that aims to have fewer cars travelling to and from festivals with more people in them.

TABLE 3.4 AVERAGE NUMBER OF PEOPLE PER CAR

Festivals surveyed by location	1 person	2 person	3 person	4 person	5+ person	Average Occupancy
1. Urban	7%	44%	28%	17%	3%	2.65
2. Peri-urban	7%	52%	20%	14%	7%	2.62
3. Peri-urban	12%	43%	21%	15%	9%	2.66
4. Peri-urban	9%	42%	21%	19%	9%	2.77
5. Greenfield	27%	31%	25%	12%	5%	2.36
6. Greenfield	11%	48%	25%	14%	3%	2.50
7. Greenfield	13%	46%	20%	15%	6%	2.56
8. Greenfield	13%	41%	19%	17%	10%	2.70

3.2.8 Car Travellers – cost of driving

The results of the survey found that approximately three quarters of car travellers ($72.8\% \pm 3.6\%$, $n=730$) spent less than £40 to drive to the festival (Figure 3.5). Further analysis found that the majority of car travellers ($86\% \pm 3.6\%$, $n=730$) who spent £60 or more on fuel were travelling with three or more people in the car. If we assume that fuel is a proxy for distance travelled we could infer that those paying more for fuel are travelling further. The higher transport cost therefore could be a motivator for having more people per car in order to share the fuel cost. In terms of achieving carbon emission reductions in audience travel if those cars that are travelling the furthest already have a relatively high occupancy level it could mean there is limited scope for creating more carbon savings by increasing the occupancy of these cars. The next level of carbon reductions would require transport mode switching from cars to public transport.



3.2.9 Car Travellers – travel planning

The analysis of all festivals except urban ones showed that over half of car travellers ($59.9\% \pm 3.6\%$, $n=730$) planned their travel less than one month before the festival. This maybe an underestimate because a fifth (21.6%) of car travellers stated they planned their travel when they bought their festival ticket, which could have been less than a month before the festival, particularly for festivals that do not sell out.

Part of the appeal of driving to festivals is the convenience of not having to plan transportation far in advance, whereas using public transport typically requires advance planning. This is because in order to be eligible for discount rates transport tickets often need to be bought well in advance. This creates a barrier for encouraging car travellers to switch transport mode.

Summary findings about car travellers

From the car occupancy survey we found:

- The average car occupancy per festival was between 2.36 to 2.77 people per car with an overall festival sector average of 2.6.
- Close to two-thirds (60%) of cars travelling to festivals have two or less people travelling in them.

From the general attitudinal survey we found:

- Three-quarters of car travellers were spending £40 or less per vehicle to drive to the festival. Furthermore, the majority of car travellers (86%) spending £60 or more on fuel per vehicle were travelling with three or more people.
- At least 60% of car travellers planned their travel less than a month before the festival.

3.2.10 Public Transport Travellers – travel companions

Festival goers coming on public transport typically travel in small groups of 1 to 3 people ($76.3\% \pm 4.4\%$, $n=491$). However, just over a tenth of people ($13.2\% \pm 4.4\%$) coming on public transport were travelling alone. Anecdotal evidence suggests that often people are joining companions at the festival site.

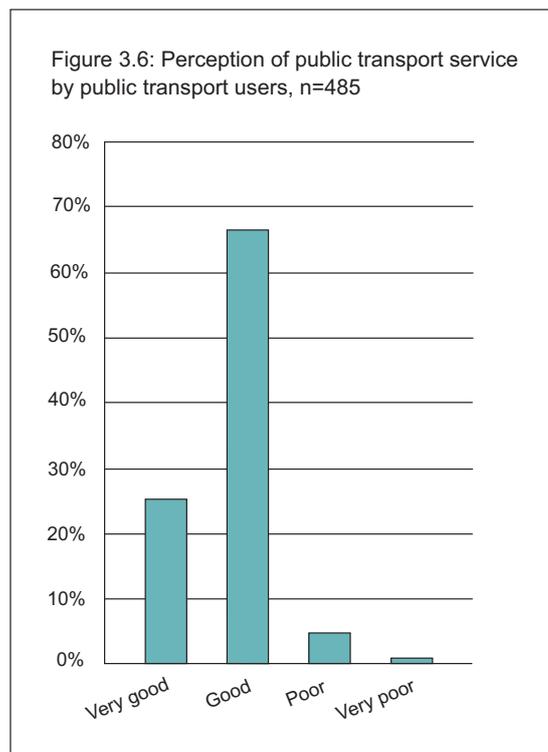
3.2.11 Public Transport Travellers – travel flexibility

When aggregating the responses of those attending peri-urban or greenfield festivals, three-quarters ($75.9\% \pm 5.5\%$, $n=491$) of public transport festival goers agreed or strongly agreed that there was sufficient flexibility in choosing times to arrive and leave the site. Urban festivals were perceived to be slightly more flexible than the peri-urban and greenfield festivals, but the difference was found not to be statistically significant. However, it is important to note this is a context specific question so there will be some variation in attitudes from festival to festival. This is highlighted in the responses collected from the online survey sent to coach travellers to several major festivals, in which festival goers disagreed to strongly disagreed that there had been sufficient flexibility in timing to arrive and leave the festival site (findings of the Coach Goer Attitudinal Survey, pp 40-41).

3.2.12 Public Transport Travellers – quality of public transport service

The analysis found that although the great majority of festival goers ($94.3\% \pm 4.4\%$, $n=485$) thought the quality of service was good or very good there was significant variation between festivals (Figure 3.6). In particular, urban and peri-urban festival goers had a better perception (mean = 1.73 ± 0.44 and 1.72 ± 0.6 respectively) of public transport service relative to greenfield festival goers (mean = 1.98 ± 0.64).

Nearly all festival goers surveyed that used public transport thought it was somewhat or very likely that they would take public transport if coming to the festival again ($93.5 \pm 4.4\%$, $n=491$). When examining the difference between urban and peri-urban/greenfield festival goers response there was a statistically significant difference on the likelihood of choosing public transport. Urban festival goers were more likely (mean = 1.39) to use public transport again, relative to peri-urban/greenfield festival goers (mean = 1.62, this is considerably higher than mean=1.39). This relationship was found to be moderately strong (Phi Value = 0.217).



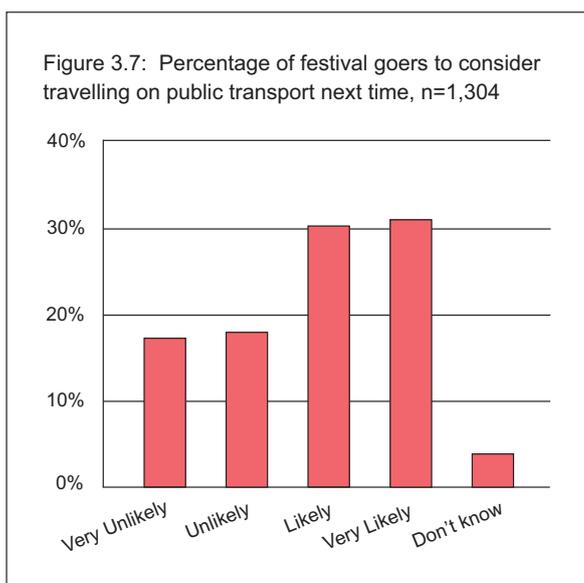
There is a statistically significant positive relationship (Gamma = 0.696) between public transport goers' perception of the public transport service and their likelihood of using it again. As festival goers' perception of the public transport service becomes better, they are more likely to use it again to travel to music festivals. The value of Gamma indicates that when predicting whether people will travel again by public transport, we would make fewer errors (69.6%) by taking people's perception of the service into account.

Over half of festival goers ($54.7\% \pm 4.4\%$, $n=491$) using public transport considered this a less expensive option than travelling by car. We found a statistically significant, strong relationship (Phi value = 0.354) between festival location and whether people perceive travelling by public transport less expensive. Indeed, more people travelling to urban festivals (72.2%) thought it was less expensive to use public transport than driving a car, relative to peri-urban/greenfield festivals (39.5%). The perception by peri-urban/greenfield audiences that public transport will be an expensive option for them presents a barrier for encouraging public transport modes of travel.

3.2.13 Public Transport – likeliness to consider using in future

Two-thirds of festival goers (61.4% ± 2.7%, n = 1,304) stated that it is likely or very likely that they will consider travelling on public transport next time they go to a festival (Figure 3.7). No significant differences were found across the various age, gender or occupation categories.

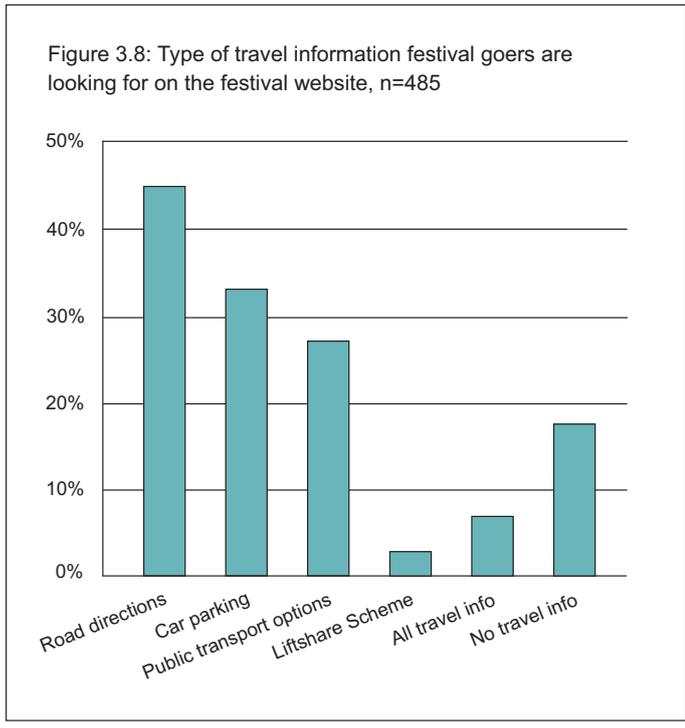
However, there is a significant correlation between the likelihood of festival goers using public transport in the future and the proximity of the festival to good public transport facilities. Furthermore, we found there to be a strong relationship (Cramer's V = 0.337) between how people travelled to the festival this time around and the likelihood of using public transport the next time. None-the-less the overall findings indicate that there is receptiveness by festival goers to public transport if it is presented and marketed in the right way.



Summary of public transport travellers & future use

From the general attitudinal survey we found:

- Public transport travellers typically travel with other people (76.3%).
- The majority of public transport travellers (75.9%) thought there was sufficient flexibility in the times available for coming and leaving the festival site. In addition, most people thought the service quality was good or very good (94.3%). However, there was significant variation in perceptions of service, with those attending an urban festival perceiving public transport to be better than those attending a greenfield or peri-urban festival.
- There is a strong positive relationship between public transport goers perception of the public transport service and their likelihood of using it again.
- More than half of festival goers (54.7%) using public transport considered this a less expensive option than travelling by car. There was a strong relationship between festival location and the perception that public transport is less expensive – urban festival goers (72.2%) vs. greenfield or peri-urban festival goers (39.5%).
- Two-thirds of festival goers (61.4%) said it was likely or very likely they would consider travelling by public transport if attending the festival again.



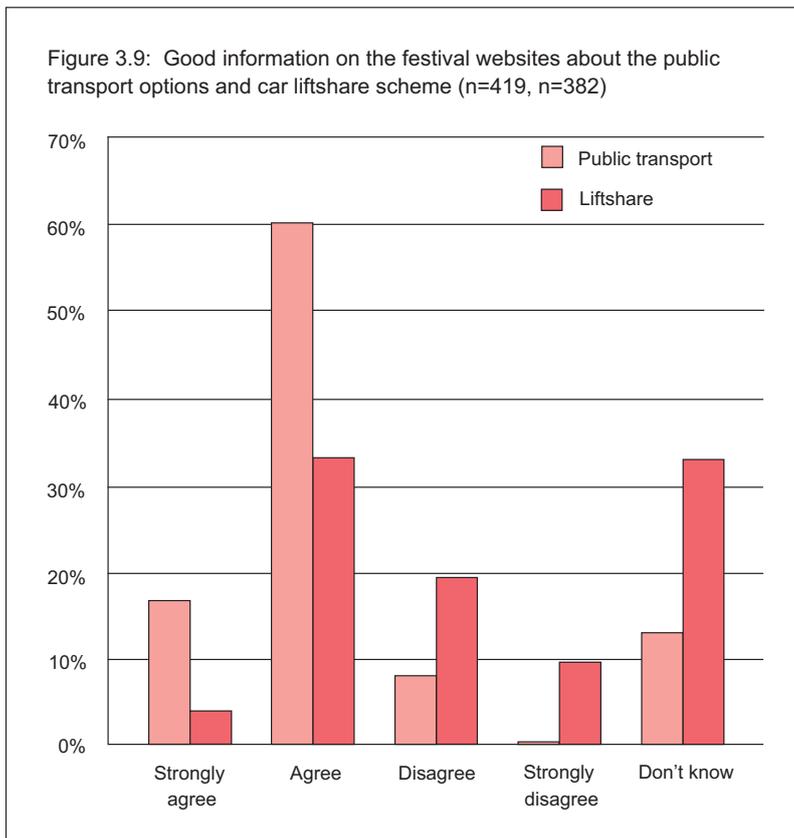
3.2.14 Website-based Travel Information – festival sites

Festival goers are much more likely to visit the website of a festival if it is located in a peri-urban or greenfield site ($54.4\% \pm 2.9\%$, $n=1,140$) compared to an urban festival ($3.6\% \pm 7.9\%$, $n=152$). Due to the very small number of people among urban festival goers that visited the festival's website to get travel information (also due to the small sample size available from urban festivals), our analysis of website use is almost entirely representative of the peri-urban/greenfield festival goer population.

Almost half of festival goers visit the website to get information related to driving to the festival, such as road directions ($44.9\% \pm 5\%$, $n=485$) and car parking information (32.8%) (Figure 3.8). Only a quarter of festival goers (27.2%) visiting a festival website said they were looking for information about the public transport options. Furthermore, only a very small

number of people (2.5%) were investigating the lift-share scheme.

Approximately three-quarters of the festival goers ($77.9\% \pm 4.9\%$, $n=419$) that visited the website of the festival agreed or strongly agreed that there was good information about public transport options. However, only a third of festival goers ($37.8\% \pm 5\%$, $n=382$) agreed or strongly agreed that there was good information about car lift-share schemes on the festival website (Figure 3.9).



The majority of festival goers (80.3% ± 4.6%, n=452) had already decided which transport mode they were going to use before visiting the festival website, in most cases the car. However, almost half of respondents (54.5% ± 3.6%, n=760) said that good information on public transport and lift-share schemes could motivate them to consider one of these options.

3.2.15 Website-based Travel Information – other websites

Aside from the festival website festival goers visit a number of other types of websites for travel information. We found that a fifth (18.8% ± 2.8%, n=1,203) surveyed at peri-urban and greenfield festivals indicated they visited at least one website for further travel information (Table 3.5). Of a sample of 668 observations, most were for road directions (45.7% ± 3.8%, n=668), but a fifth (20%) were to rail operator websites and a third (34.6%) were to coach operator websites. A quarter (24.7%) of these respondents had also visited general festival websites, presenting an opportunity for further promoting public transport and car lift-share schemes via these websites.

TABLE 3.5 OTHER TYPES OF WEBSITES VISITED FOR TRAVEL INFORMATION

Road directions	45.7%
Train operators	20.0%
Coach operators	34.6%
General festival information	24.7%
Other	15.3%

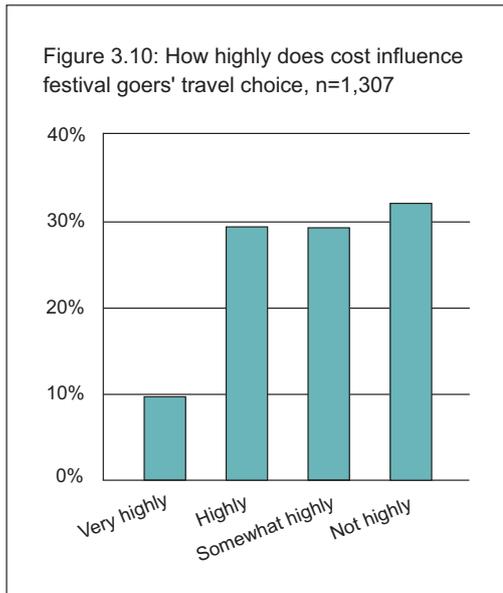
Summary findings of travel information on festival websites

From the general attitudinal survey we found:

- Festival goers are more likely to visit the website of the festival if it is a greenfield or peri-urban festival (54.5%) compared to an urban festival (3.6%)
- Three-quarters (77.9%) of festival goers visiting the festival website agreed or strongly agreed there was good information about the public transport options. However, only a third (37.8%) agreed or strongly agreed this was the case for car lift-share schemes.
- The majority of those visiting the festival's website (80.3%) had already decided which mode of transport they were going to use to travel to the festival.
- More than half of people (54.5%) said that good information on public transport options could motivate them to consider coming by one of these options.

3.2.16 Perceptions of Travel Costs

Approximately a third of festival goers (39% ± 2.7%, n=1,307) indicated that the cost of travel highly or very highly influenced their travel choice (Figure 3.10). We found a statistically significant difference between festival goers attending multiple-day festivals compared to one-day ticket holders. One-day ticket holders were found to be more influenced by transport costs (mean = 2.61), relative to multiple-day ticket holders (mean = 2.92). This relationship is moderately strong (Phi value = 0.277).

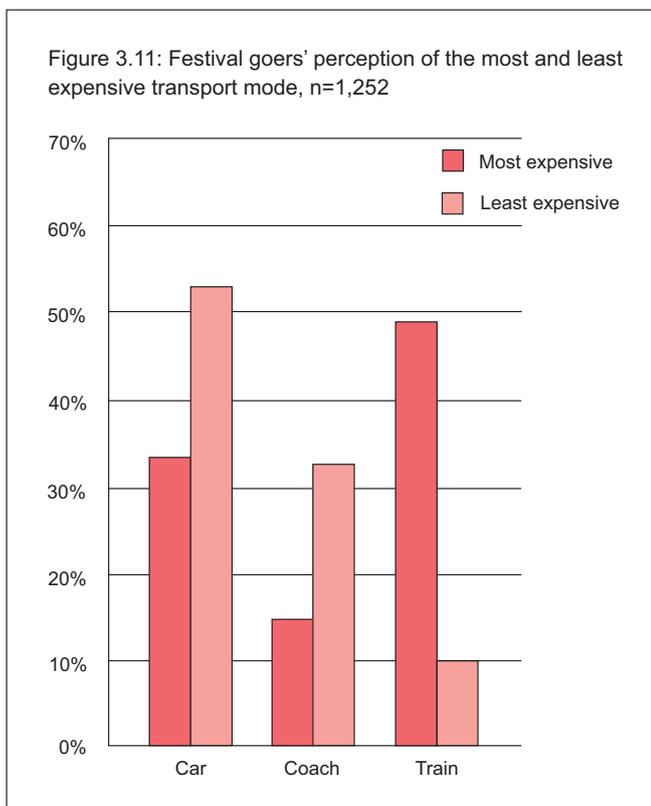


The relationship between festival location and the degree to which transport costs influence travel choice was also explored. A (statistically) significant difference was found between peri-urban/greenfield and urban festival goers in terms of how much travel costs influenced their travel choice. For urban festival goers transport costs factor in more highly (mean = 2.61) than the peri-urban/greenfield festival goers (mean=2.86 and 2.96 respectively) in their transport decision*. The relationship was found to be moderately strong between festival location and travel costs. This is likely to be linked to the fact that urban festivals are one-day events so festival goers will be more conscious of value for money and in addition the majority will have travelled by public transport because parking a car in an urban centre is likely to be expensive and difficult.

The relationship between the cost of travel and the occupation of the festival goer was also explored. There is a statistically significant difference between occupation categories, with students and government professionals scoring higher on how much they factor travel costs into their travel choices.

The relationship between age and travel cost was explored (n=1,285) and there is no statistical difference in different age categories and travel costs into their travel decision.

In terms of perceptions about which mode of transport is the most and/or least expensive, festival goers identified train as the most expensive (49% ± 2.8%, n=1,252) and car as least expensive (53% ± 2.7%, n=1,238) (Figure 3.11). The coach was identified as the second least expensive transport mode. Coach travel is more likely to compete with car travel on cost if the festival goer is travelling from relatively far away and the car is not at full occupancy (i.e. 3 or 4 people). For car drivers travelling from nearby it will be difficult for public transport modes to compete with the low travel cost.



Summary of findings of festival goers' perception of travel costs

From the general attitudinal study we found:

- Only a third (39%) of festival goers stated that the cost of travel highly or very highly influenced their travel choice.
- The train was identified as the most expensive (49%) and the car the least expensive (53%) travel option.

3.2.17 Car Lift-share Schemes - experiences

Only a very small percentage of the festival goer population surveyed had ever used a car lift-share scheme to travel to a festival (6.7% ± 2.7%, n=1,308). Over half of the people who had participated in a lift-share scheme had offered a lift (55.5% ± 10.9%, n=81) compared to a quarter who had asked for a lift (26.6%). A smaller proportion of people had both offered and asked for lifts (17.9%). Nearly everyone who had participated in a car lift-share scheme had a positive or very positive experience (91%). Also, many would use a car lift-share scheme again (93.5%).

3.2.18 Car Lift-share Schemes - perceptions

The majority of survey respondents agreed or strongly agreed that car lift-sharing could be a good way to reduce the number of cars driving to a festival (91.6% ± 2.8%, n=1,255).

When asked if they thought it safe for people who do not know each other to share a car journey about half of people agreed or strongly agreed (56.6% ± 2.8%, n=1,208). We explored if there was a relationship between safety and age or gender in terms of perceptions to the safety of car lift-sharing. We found there was a weak to moderate relationship, with festival goers less than 24 years old more likely to agree it was not safe. Also, we found a weak to moderate relationship with female festival goers more likely to agree it was not safe to share a car journey with people they do not know.

Almost half of festival goers agreed or strongly agreed that car lift-sharing is more hassle than it is worth (43.6% ± 2.9%, n=1,135) versus a third who did not think participating in a car lift-share scheme would be a hassle (35.1 ± 2.9%, n=1,135).

Interestingly, half of respondents would consider asking for a lift (49.5% ± 2.8%, n=1,215) and half of respondents would consider offering others a lift through a car lift-share scheme (53.2% ± 2.8%, n=1,230). We found there was no statistical significance in how festival goers answered this question based on their age or gender.

When festival goers were asked if they thought the promoter had effectively promoted how to sign-up to a car lift-share scheme only a fifth agreed or strongly agreed (21.1% ± 2.8%, n=1,182).

Approximately two-thirds of peri-urban or greenfield festival goers said it is unlikely or very unlikely to consider using a formal lift-share scheme if they were coming to the festival again (58.9% ± 2.9%, n=1,150). However, a third of festival goers are open to the idea of participating in a car lift-share scheme (32.7% ± 2.9%, n=1,150), which, if well promoted, could be one effective means of increasing the car occupancy rates.

Case Study 11: Roskilde Festival provides a wide range of public transport information via their user-friendly website, including trains, free shuttle buses, local buses, ferries, flights and ride share. The effect of the direct to site buses and the train station located right at the festival site encourages high uptake of these options: 55 % arrive by public transport.

Well-established on the festival scene, Roskilde Festival attracts audiences from countries all over Europe, and where airport information has been provided, it also recommends buying a CO₂ quota as compensation for the flight, linking directly to carbon offset company Climate Care.

Roskilde Festival encourages people who are driving to bring a full carload of passengers to the festival, thereby reducing the impact of everyone travelling separately. The cars going to the festival had an average of 3.5 passengers in 2008 – well above average.

Festival goers can also sign up to their new climate campaign 'Green Footsteps' which helps individuals monitor and record the impact of their time at the festival – including transport to and from the festival, eating on site, green camping and more. Festival goers can qualify for a central camping spot if they report their green footsteps before the festival.

Summary findings of attitudes to car lift-share schemes

From the general attitudinal survey we found:

- Only a very small percentage had ever used a car lift-share scheme at one time to travel to a festival (6.7%). Nearly everyone who had participated in a scheme had had a positive or very positive experience (91%) and many would use a scheme again (93.5%).
- When all respondents were asked the majority (91.6%) agreed or strongly agreed that a car lift-share scheme could be a good way to reduce the number of cars travelling to a festival.
- Half (49.5%) thought they would consider asking for a lift and half (53.2%) would consider offering a lift through a car lift-share scheme. No statistical significance based on gender or age to these answers was found.
- Only a fifth (21.1%) thought promoters had done a good job promoting the car lift-share scheme.
- Two-thirds of greenfield and peri-urban festivals goers stated it was unlikely they would use a car lift-share scheme.

3.2.19 Incentives – public transport

In addition to asking about preferred incentives for car lift-sharing we also asked festival goers which incentives they thought would most encourage them to use public transport. The three most popular incentives were ticket discount (i.e. on the entrance ticket or the public transport ticket) (59.2%, $\pm 2.7\%$, 1,361), vouchers (e.g. food, drink, t-shirt or music) (53.5%) and preferential treatment for camping sites (32.3%) (Figure 3.12). In general, significant correlations between age, gender, occupation and the type of incentive the respondent most preferred were not found.

3.2.20 Incentives - car lift-share

The survey asked festival goers which incentives from a list of suggestions they thought would most encourage them to car lift-share. The three most popular incentives were vouchers (e.g. food, drink, t-shirt or music) (57.8% $\pm 2.7\%$, 1,313), preferential treatment for camping (43% $\pm 2.7\%$) and lower car parking rates (34% $\pm 2.7\%$) (Figure 3.12).

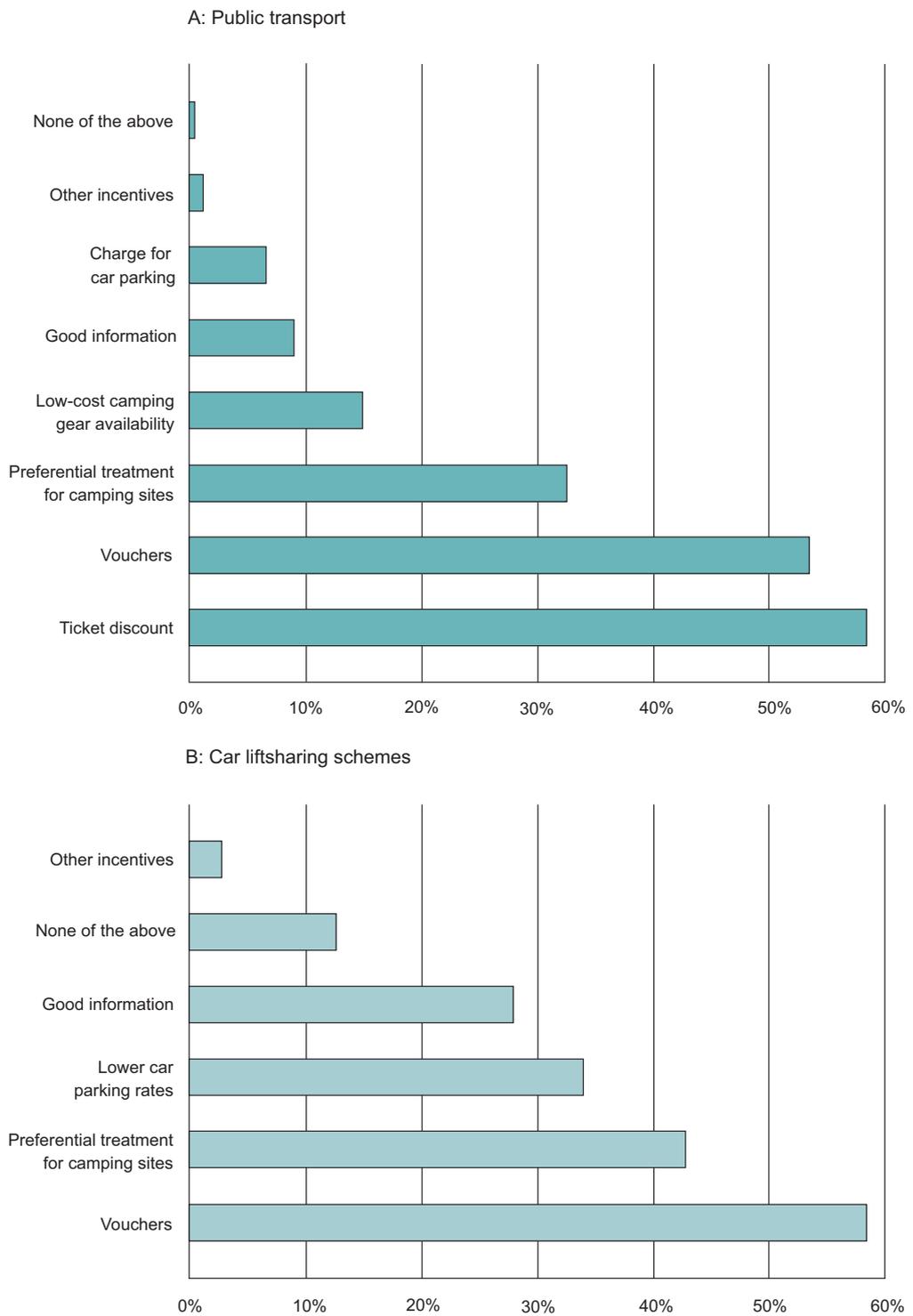
Case Study 12: Festival Republic's Reading & Leeds Festivals are sited in two very different locations. The former is near a busy town centre, with accessible links via public transport, whereas the latter is in Bramham Park, Leeds, a bit further afield from the hustle and bustle.

However Leeds' rural location poses less of a problem for public transport access owing to the scheme that Festival Republic set up with See Tickets, who arrange a specific allocation of combination coach and festival tickets for weekend festival-goers. The fact that Reading and Leeds festivals sell out increases the capacity of the promoter to influence festival-goer travel options. The combined coach and festival tickets are only available for collection on the coach, which prevents festival-goers buying the tickets to gain entry and then travelling by car.

The routes by See Coaches pick up and drop off at selected cities and towns where their ticketing research over the years has shown a viable need or potential for group transport. The tickets are also cheaper to purchase as a combination ticket than to buy them separately, an incentive for the customer to save money by taking this option. Coach travel is the most efficient method of transport, as carbon emissions are only 22g CO₂ / passenger mile (based on a 50 person capacity).

The promotion of the event and the available combination tickets are published across festival community websites, on the See Tickets website, the official festival website and more. It shows a conscious effort by festival organisers to reduce the amount of cars and disruption on the roads, as well as reducing carbon emissions by audience travel. Alongside this national transport option, the festivals also offer a variety of shuttle buses from the local stations and city centres.

Figure 3.12: Preferred incentives for motivating use of public transport or car liftsharing (n=1,361, n=1,313)



Summary findings of car liftshare and public transport Incentives

From the general attitudinal survey we found:

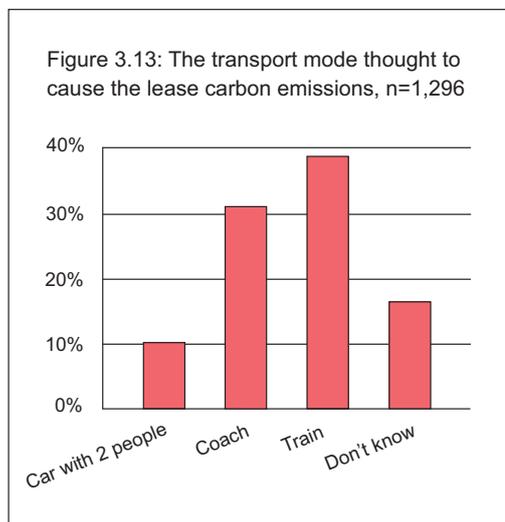
- The three most popular incentives stated by festival goers for encouraging them to car lift-share were – food, drink or music vouchers (57.8%), preferential camping allocation (43%), and lower car parking rates (34%).
- The three most popular incentives stated by festival goers for encouraging them to use public transport were – discount on public transport ticket (59.2%), food, drink or music vouchers (53.5%) and preferential camping allocation (32.3%).

3.2.2.1 Carbon Emissions - perceptions of the least emitting mode

Calculating the emissions per festival goer mile by different transport modes using standard conversion factors – a full coach (chartered for the event with 50 person capacity) has the least carbon emissions (22 g CO₂ / passenger mile) followed by train (96 g CO₂ / passenger mile), then three people in a car (115 g CO₂ / passenger mile) and finally two people in a car (172 g CO₂ / passenger mile) (Defra, 2008 & NAEI, 2005). This means travelling by coach is almost eight times (7.8) more carbon efficient per person than travelling in a car with two people.

The train appears to be the more carbon intensive public transport mode, however the emissions factor is an average of all rail services, which will include trains that may have low passenger occupancy rates. The coach is a highly carbon efficient means of transporting people especially to festivals, but a train with a high occupancy rate will also be carbon efficient.

Despite the complexities and trade-offs between transport modes, we asked festival goers which transport mode travelling 100 miles they perceived produced the least amount of emissions per person. The results show that most thought that train (38.9% ± 2.7%, n=1,296) was the least carbon intensive way to travel to a festival, followed by coach (31.7% ± 2.7%). However, almost a fifth said they did not know (17% ± 2.7%) (Figure 3.13).



Among car travellers, only a tenth (12.4% ± 2.8%, n = 685) answered that a car with 2 people was the transport option that causes the least carbon emissions for 100 miles travelled. The majority thought it was train (40.9% ± 2.8%), followed by coach (24.1% ± 2.8%). This would indicate that the great majority of car drivers are already aware of the least carbon intensive option, which gives an indication of the trade-off perceived between environmental awareness and personal comfort.

Interestingly, more train travellers thought that coach was the least carbon intensive travel option (41.2% ± 2.8%, n = 289) instead of the train option (38.4% ± 2.8%), which indicates the need for clear information, and/or that environmental impact would not be a priority for people choosing to travel by train. Looking at coach travellers (n = 131), approximately one third of them thought coach was the least carbon intensive travel option, while another third thought it was the train.

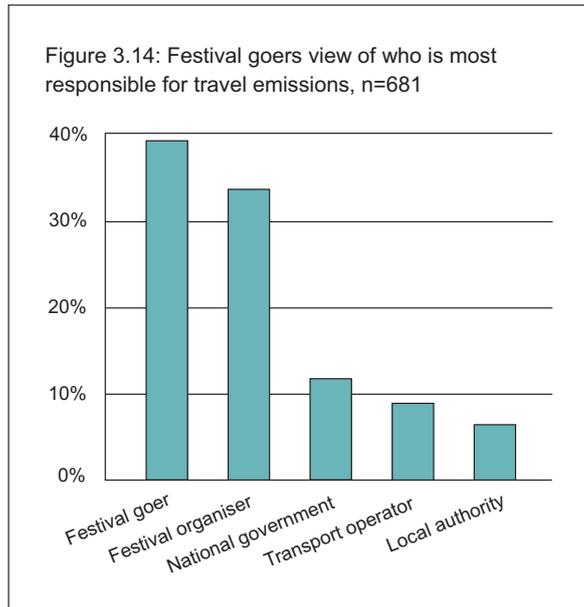
*Case Study 13: **Sunrise Festival** has decreased its size in 2009, and to prevent overcrowding of people and vehicles on site, they only sell advance tickets, and provide the location and transport details to those who have booked. This helps the organisers control the flow of people into the festival whether by car, shuttle bus, coach, train or liftshare.*

When sending the tickets and site information out to ticket holders, they promote the use of public transport and lift sharing, with links to Freewheelers.com, and at the time of print they are updating the green section on their website, to provide thorough transport information, including local cycle routes.

Future plans include working with Somerset County Council to provide bus services, and running their coach services on used cooking oil.

3.2.22 Carbon Emissions – who is responsible for carbon emissions

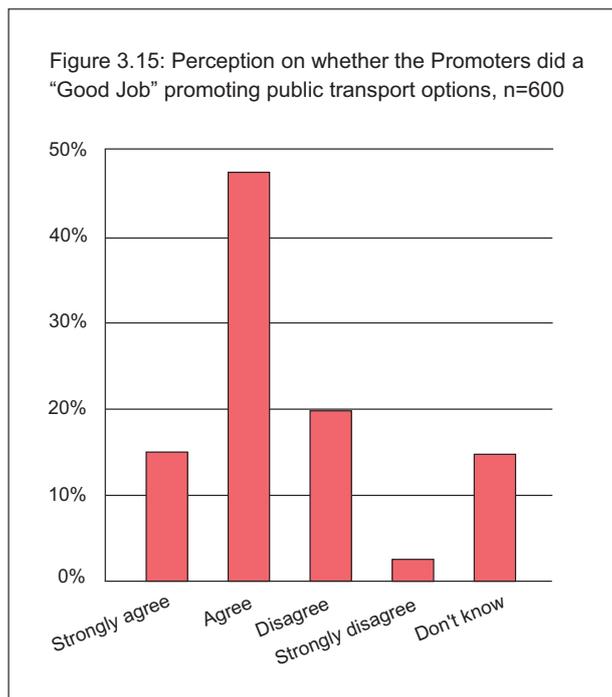
Just over a third of festival goers ($39.1\% \pm 3.8\%$, $n=681$) considered that they bore the most responsibility for reducing carbon emissions associated from festival travel. However, just under a third ($33.5 \pm 3.8\%$) said they felt responsibility lay with the festival organisers (Figure 3.14).



The analysis found no significant difference across festivals regarding who is considered more responsible for reducing CO₂, which indicates that opinion on this issue was quite uniform.

3.2.23 Perceptions of the promoter doing a “good job” to promote public transport

Almost two-thirds of festival goers ($62.9 \pm 4\%$, $n=600$) agreed or strongly agreed that the promoters did a “good job” promoting public transport options (Figure 3.15). This suggests that festival goers felt reasonably well informed of public transport options but that this awareness is not translating into action.



3.2.24 Willingness to pay £2 to improve public transport

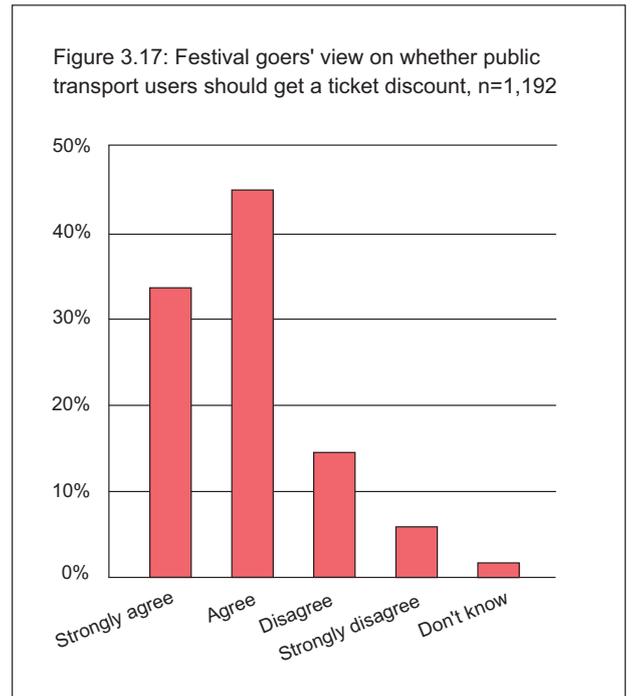
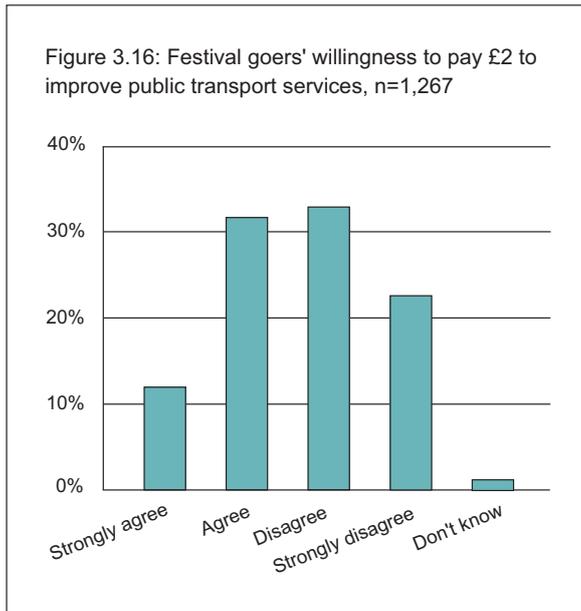
A significant but minority percentage of festival goers agreed or strongly agreed that it was a good idea to pay an additional £2 on a festival ticket to improve public transport services ($43.3 \pm 2.8\%$, $n=1,267$) (Figure 3.16). However, the majority ($55.5 \pm 2.8\%$) disagreed or strongly disagreed.

There was a statistically significant difference in willingness to pay depending on proximity to public transport. Festival goers with lower proximity to public transport were more willing to pay than festival goers with high proximity to public transport, but it was only weak to moderate (Cramer’s $V = 0.157$, $\text{Gamma} = 0.303$). In addition, we looked to see if there was any statistical difference between willingness to pay and the mode of transport the respondent has taken, but we found no correlation.

3.2.25 Ticket discounts for public transport users

The survey found that three-quarters of festival goers ($77.8 \pm 2.8\%$, $n=1,192$) agreed or strongly

agreed that festivals goers who travel with public transport should get a discount (Figure 3.17). There is a moderately strong (Cramer’s $V=0.147$) difference between how people travelled to the festivals and their view on whether ticket discounts should be made available to those travelling on public transport. Festival goers that had used public transport tended to agree that they should get a discount. There was no statistical difference between the festival’s proximity to public transport and views of people on receiving ticket discounts if using public transport.



Summary findings of carbon responsibility and festival travel

From the general attitudinal survey we found:

- Festival goers perceive the train (38.9%) to have the lowest carbon emissions per person travelling 100 miles, followed by coach (31.7%) and a car with 2 people (12.4%). In addition, almost a fifth (17%) of respondents did not know which transport mode would produce the lowest carbon emissions.
- A third (39.1%) of festival goers felt they were most responsible for reducing carbon emissions; a third thought responsibility lay primarily with festival organisers (33.5%); and the remaining festival goers thought either transport operators, local authorities or national government were most responsible for festival goers' travel emissions.
- Two-thirds of festival goers (62.9%) thought promoters "did a good job" of promoting the public transportation options.
- A large proportion of festival goers (43.3%) were willing to pay £2 on their festival entrance ticket if the money was used to improve public transport services. However, a larger proportion (55.5%) of respondents were not willing to pay an additional £2. Festival goers at festivals with less proximity to public transport were more willing to pay the £2 to improve public transport services.

*Case Study 14: Scotland's **T in The Park** festival promotes a range of public transport and travel links to their rural location in Balado, Kinross-Shire. T in The Park also carbon offset a range of festival impacts, including the emissions generated by festival audience travel. Working with CarbonNeutral, they organise and pay for the carbon offsetting on behalf of their festival audience. The funds are then put into sustainability schemes and projects around the world.*

T in The Park also promote a service called 'Be Chilled', where visitors can pre-order a chilled case or cans of Tenants beer on site. This alleviates the strain for festival goers to carry so much with them, and in turn, with less to carry, makes public transport more viable.

It is of particular interest for T in The Park to have a strong environmental action plan, as the event takes place near the Loch Leven, a nature reserve and a Site of Specific Scientific Interest (SSSI). Working with Scottish Natural Heritage and the Scottish Environment Protection Agency they take major measures to protect watercourses and discourage phosphorous from entering the local Loch, whilst supporting the fragile rural economy.

FINDINGS OF THE COACH GOER ATTITUDINAL SURVEY

More than 1,000 coach goers completed one of the two coach surveys. Here we present the key findings from the full version completed by 626 coach goers, and interject where appropriate the findings of the abridged version completed by 517 people. For examples of the anecdotal positive and negative comments made by coach travellers at the end of the survey read Appendix III.

Finding 1: Combined tickets the primary reason people travel by coach

Most coach goers travel by coach only because a combined coach and festival ticket was the only ticket type available (72.1% ± 3.9%). Convenience was a significant factor (44.9%), while very few people chose to travel by coach for reasons of cost (14%) (n=626).

Finding 2: Perception of service flexibility will vary festival-to-festival

There was substantial variation in opinions between the two pairs of weekend festivals. For one of the joint weekend festivals most respondents disagreed or strongly disagreed that there had been sufficient flexibility in choosing times to come (82.3%) and go (74.8%) from the festival. However, respondents for the other joint weekend festival had the reverse opinion with the great majority of people (85.5%) agreeing or strongly agreeing that there was sufficient flexibility. This latter finding is consistent with the coach travellers surveyed in the all festival goer attitudinal survey.

Finding 3: Overall coach travellers think the coach service was good or very good

Despite concerns about the flexibility of the coach service three-quarters of coach travellers (75.6%) considered the overall quality of service to be good or very good.

Finding 4: Coach travellers likely or somewhat likely to travel by coach again

Almost three-quarters of coach travellers (71.1%) said if coming again to the festival it is likely or somewhat likely they would travel by coach again.

Finding 5: Festival website important for motivating people to travel by coach

Only about half of respondents (48.8%) had already decided their transport mode prior to visiting the festival website, while a considerable number (41.2%) decided after visiting the website. Furthermore, more than two thirds of coach travellers (72.3%) agreed or strongly agreed that the information about public transport options at the website was as good, while only 7.5% disagreed or strongly disagreed with this statement.

This indicates that having good information about the public transport options on the website could attract festival goers to consider using one of these options. In addition to a festival's own website, transport operators websites are frequently used by those considering travelling to a festival by public transport. Over a third of coach travellers (55%) visited train and coach operator websites to plan their travel, therefore, good festival travel information on these websites could help motivate more festival goers to use public transport.

Finding 6: The festival goer is most responsible for emissions

Almost half of the coach travellers (47.2 %) thought that festival goers should be most responsible for reducing festival goers' travel related carbon emissions, while around a fourth (26.1%) considered that festival organisers to be those most responsible. Close to a fifth (16.8 %) thought that either the transport operators or the government should be held responsible.

Finding 7: Festival organisers could do more to promote public transport options

Approximately half of coach travellers (53.2% and 46% respectively from the two sets of coach surveys) thought that the festival organisers are doing enough to encourage people to travel to festivals by public transport, while a third (31.3% and 39.4%) disagreed with this statement. A notable proportion (15.5 % and 14.6%) didn't know. This is lower than the finding from the all festival goer attitudinal survey in which two-thirds thought festival organisers were doing a "good job" promoting public transport.

Finding 8: Yes to ticket discount, preferential camping and voucher incentives

As with the all festival goer attitudinal survey by far the majority of coach travellers across both coach surveys consider ticket discount as the best incentive to motivate use of public transport, followed by vouchers and preferential treatment for camping sites. In addition, a considerable number thought that good information would be a sufficient incentive.

Finding 9: There is willingness to pay £2 to improve public transport services

The majority of the coach travellers (61.3%) agreed or strongly agreed that they would be willing to pay an additional £2 on their festival entrance ticket if this money was used to improve public transport services, while almost a third (29.9 %) disagreed or strongly disagreed to pay this amount of money.

Finding 10: Coach travellers' ideas for making coach travel an attractive option

Coach travellers gave a number of suggestions for how coach travel could be a more attractive option which included: quicker travel to and from festival; preferential driving lane bypassing car travellers; more pickup points and extended public transport network; public transport being made the only option for getting the early bird ticket or coach travellers getting an early bird ticket to secure better camping spots; discount on event ticket; free transport to campsite; easy entry to site with no queuing at gates; and festival staff helping coach goers at the coach terminal.

“Coach travellers should be offered earlier entrance to the rest of the public as an incentive to travel in an environmentally friendly way, so they are not disadvantaged in finding a camping space”.

Finding 11: Coach travellers' concerns

The most frequently cited concerns were: poor signage and instruction when arriving at the coach terminal; uninformed coach drivers not knowing how to get to the festival site or how to handout the entrance tickets causing arrival delays; drop-off points being some distance from the festival entrance gates; difficulty finding good camping spots because of arrival timings; a coach ticket not competing with the cost of travelling by car; coach timings not accommodating well those with work obligations; and poor treatment of luggage.

“(promoters)... make it seem as if the people getting the coach tickets have the raw deal to the people going by car because they have a disadvantage in getting to the best camping spots...”.

Finding 12: Coach travellers' positive comments

The most frequently cited positive comments were: it was stress-free way to travel; no delays; no queues; bypassing car traffic; drivers being safe, professional and friendly; and a good spirit on the coach creating a positive and fun mood.

Finding 13: Coach travellers likely to be students

The majority of coach travellers were students (60.4 %), followed by service providers (19.9%). Therefore, students are an important group for festival organisers and transport operators to target in encouraging the use of public transport services for their festival travel.

Section 4: Conclusions

The car is likely to continue to remain the predominant mode for audience festival travel due to its perceived convenience and relatively low cost compared to public transport options.

Many festival goers using public transport have positive experiences and are likely to use it again in subsequent years. However, the provision of a high quality public transport service must be maintained in terms of reliability, flexibility, punctuality, organisation (at bus station and festival site) and friendliness of staff to ensure future use and recommendation to friends.

Festival goers are reasonably aware of public transport options available and that these options have a lower emissions profile. However, awareness of public transport options and transports' environmental impacts is not sufficient motivation to change travel behaviour without incentives and disincentives.

Festivals will need to customise travel emissions reduction strategies to fit their audience and locality. Promoters' knowledge of their audience is an essential basis from which to devise and communicate effective travel campaigns.

Promoters are beginning to develop transport strategies to reduce emission audience travel emissions. But their ability to act will be limited without wider support, in particular from travel operators and local authorities. A multi-actor and multi-pronged approach will be required, which co-ordinates and incentivises festival organisers, travel operators, local authorities and audiences.

*Case Study 15: Summer 2009 sees **The Royal Shakespeare Company** and **Chiltern Railways** team up to offer 6 late-night 'Shakespeare Special' trains from Stratford-upon-Avon to London. Lobbying from *The Independent* newspaper added impetus to provide a better service for those theatre goers who are caught out by the standard last train time of 11pm. Instead this summer the Shakespeare Specials will depart at 11:20pm, ensuring that the positive experience of a show doesn't end when the lights go down.*

Section 5: Recommendations

1. Build Partnerships

- Build focused partnerships between event organisers, travel operators, local authorities and other relevant actors to reduce travel emissions.

2. Develop Information Resources

- High-quality non-commercial travel information and advice presented in an accessible and relevant format, specifically:
 - i. A web-based information portal for music event organisers and other relevant stakeholders (i.e. travel operators, local authorities, and travel campaign organisations) to provide resources and support to the festival sector, which could extend to other cultural event organisers. The portal should:
 - gather existing schemes and indicate the impacts in terms of take up and carbon reduction
 - identify audience members to target for further take up
 - share good practice with an emphasis on effective ways of shifting audience travel towards low carbon behaviours.
 - ii. A web-based information and application tool for festival goers providing clear communication messages about travel choices, carbon impacts and the solutions and support available for reducing emissions.

3. Support Leisure Travel Innovations

- Extend and develop incentive and disincentive schemes to increase the uptake of public transport services to music events and communicate carbon impact findings to relevant stakeholders.
- Extend and develop existing coach schemes and increase incentives for coach ticket purchasing.
- Support market adoption of innovative low carbon car technology by generating partnerships, for example, with car hire services/manufacturers to provide cars for rental to music and cultural events.

4. Monitor Audience Travel Emissions

- Music events should undertake regular audits of audience travel. The Carbon Sink¹³, an energy measurement tool developed by Julie's Bicycle is available to event organisers. It provides a standardised means for calculating audience travel emissions from events.

- Use industry benchmarks¹⁴ to determine performance for audience travel emissions.

- Continued research of audience travel to music events. Extend the research of audience travel patterns and attitudes to venue-based music events. In addition, undertake research of the incentives and disincentives that could motivate changes in leisure travel behaviour as well as the best means of communicating low carbon travel options.

5. Travel Strategies & Communication

- The development of targeted and context specific strategies to reduce emissions, especially from travel to greenfield sites.
- Low carbon travel options should be set out with the priorities, concerns and interests of festival audiences in mind so as to inspire people to take them up.
- Work with existing public transport providers (National Rail, National Express/Coach Services, Liftshare, and cycling organisations etc.) to create festival and outdoor event specific campaigns, which will appeal to audiences.

6. Bi-Annual High Level Roundtable for Leisure Travel

- Festivals are only one part of culture and leisure activities in the UK. There is a real leadership opportunity for the culture sector to actively engage and have pivotal role in travel transformations. To explore this leadership opportunity it is recommended a bi-annual high level Leisure Travel Roundtable of key event organisers in the cultural sector (e.g. music, sport, national trust etc.), travel operators, and government (e.g. representative from Department for Energy and Climate Change, Department for Environment, Food and Rural Affairs and Department for Transport and Department for Communities and Local Government) to develop joint vision and strategies for transforming to low carbon leisure travel. The Roundtable would be the planning forum for the Summit setting the agenda as well as identifying realistic targets and sector commitments for developing emission solutions from leisure travel.

7. A Bi-Annual Leisure Travel Summit

- For cultural organisations, travel operators, local authorities, applicable government departments, audience/membership representatives and other stakeholders. The Summit would be one of the means along with the portal where knowledge gets disseminated. The Leisure Travel Roundtable and Summit would be cross-cultural sectors – and the Julie's Bicycle travel working group would be focusing on the specific travel issues of the music industry and feeding into the cross industry travel initiatives.

¹³ ¹⁴ www.juliesbicycle.com/resources

References

- Akerman, J., and Hojer, M. (2006). How much transport can the climate stand? Sweden on a sustainable path in 2050. *Energy Policy* 34 (14), 1944–1957
- Anable J., Lane B., and Kelay T. (2006). A review of public attitudes to climate change and Transport. Department for Transport, UK Government
- Anable J., and Gatersleben B. (2005a). All work and no play? The role of instrumental and affective factors in work and leisure journeys by different travel modes. *Transportation Research Part A* 39 (2005) 163–181
- Anable, J. (2005b). 'Complacent car addicts' or 'aspiring environmentalists'? Identifying travel behaviour segments using attitude theory. *Transport Policy* 12 (1), 65–78
- Andreassen, T.W. (1995). Dissatisfaction with public services: the case of public transportation. *Journal of Services Marketing* 9 (5), 30–41
- Beirao, J.A., and Cabral S. J. A. (2007). Understanding attitudes towards public transport and private car: A qualitative study. *Transport Policy* 14 (2007), 478–489
- Bottrill, C., Lye, G., Boykoff, M., and Liverman, D. (2008). Julie's Bicycle First Step Report: UK Music Industry Greenhouse Gas Emissions for 2007. Environmental Change Institute, Oxford University, Oxford
- Defra (2008). Guidelines to Defra's GHG Conversion Factors (annexes). Department for Environment, Food and Rural Affairs, London.
- Department of Transport (2008). Transport Statistics Great Britain 2007, 33rd Edition. The Stationery Office, London
- Gross, R., Heptonstall, P., Anable, J., Greenacre, and E4tech (2009). What policies are effective at reducing carbon emissions from surface passenger transport? Technology and Policy Assessment Function of the UK Energy Research Centre, London
- Gronau W., Kagermeier A. (2007). Key factors for successful leisure and tourism public transport provision. *Journal of Transport Geography* 15 (2007), 127–135
- Handy, S., Weston, L., and Mokhtarian, P.L. (2005). 'Driving by choice or necessity? *Transportation Research Part A* 39 (2–3), 183–203
- Healy J. (2007). "The essentials of statistics: a tool for social research". Thomson Wadsworth, USA
- Hickman, R., and Banister, D. (2007). Looking over the horizon: transport and reduced CO₂ emissions in the UK by 2030. *Transport Policy* 14 (5), 377–387
- Hiscock, R., Macintyre, S., Kearns, A., and Ellaway, A. (2002). 'Means of transport and ontological security: do cars provide psycho-social benefits to their users? *Transportation Research Part D* 7 (2), 119–135
- Jeng, J., and Fesenmaier, D. R. (2002). Conceptualizing the Travel Decision-Making Hierarchy: A Review of Recent Developments. *Tourism Analysis*, Volume 7, Number 1, 2002, pp. 15-32(18)
- Jensen, M. (1999). Passion and heart in transport – a sociological analysis on transport behaviour. *Transport Policy* 6 (1), 19–33
- Jones, M. (forthcoming in 2009). Sustainable Event Management: A Practical Guide. Earthscan, London
- Kwon, T-H. (2005). A scenario analysis of CO₂ emission trends from car travel: Great Britain 2000–2030. *Transport Policy* 12 (2), 175–184
- Steg, L. (2005). Car use: lust and must. Instrumental, symbolic and affective motives for car use. *Transportation Research Part A: Policy and Practice* 39 (2–3), 147–162
- Umweltbundesamt and IWW, (2000). OECD Project on Environmentally Sustainable Transport (EST) Phase 3. German Case Study Final Draft. ENV/EPOC/PPC/T(99)6/FINAL/ANN3. Umweltbundesamt, Berlin and Institut für Wirtschaftspolitik und Wirtschaftsforschung, Karlsruhe

Appendix I: National and Local Authority Green Travel Initiatives

Appendix I: Snapshot of National and Local Authority Initiatives

Woking Borough Council

- Car Club Service started, including car pooling for Council Staff.
- Now have a 5p levy charge on car parks, where the money is donated to carbon offsetting charities and environmental research by the Council.

Islington Council

- Comprehensive guide and information for walking, cycling, and public transport, including the shortening and combining of car trips, driving eco-friendly cars, residential cycle parking.
- Promotes walking, cycling and public transport as part of their website, shortening and combining car trips, driving eco friendly cars
- Part of Connect2 (part of Sustrans), spending awards money on improving walking and cycling facilities in the Borough.
- Part of London Cycle Hire Scheme (run by Mayor Of London).
- Works with Streetcar to provide on-street hire cars in Islington.
- Runs 'Giant Green Environmental Awards'.
- Promotes green alternatives for staff travel, and have own Green Travel Plan for within the Council.
- Runs sports and cycling Festivals in June.
- Promotes incentives via online competitions to win vouchers for bicycles and memberships to Streetcar.
- Walk to Work Week incentive, with prizes for best photos.

Sustrans

- UK's leading sustainable transport charity.
- Developing The National Cycle Network, carrying over 230 journeys each year, and has seen the completion of 10,000 miles of the network so far, and the hire of 2000 volunteers to maintain those routes within their own communities.
- Has an active travel team in place whose objectives are to persuade government to promote walking and cycling as healthy forms of transport.
- Pioneered TravelSmart within the UK, which provides tailor-made information to households in regards to walking, cycling and using local, public transport.
- Safe Routes to School scheme, working with young people and Schools to ensure that routes and made safer

and more fun (such as walking and cycling).

- Bike It – another scheme with young persons and schools around the UK to encourage cycling to school.
- Currently building links to schools with the National Cycle Network, providing kids with traffic-free routes to school, environmentally-friendly travel and healthier options.
- Liveable Neighbourhoods – promoting and updating city living by providing green, open spaces for people to live in their communities, shopping locally, with Art in the Travelling Landscapes providing memorable public spaces and commission quality artworks within communities.

Direct Gov

- Comprehensive, dedicated travel section on their website which serves as an information portal to citizens. Available from the environmental section, and provides advice and tips with quick travel guides, handy hints to cut emissions, information on buying eco-friendly cars, maintaining your vehicles, planning holidays, car sharing and car club information, trails and walks, information on bio-fuels, journey planners and more.
- Also provides information and links to Act on CO₂, encouraging people to get involved.

DfT – Department for Transport

- Smarter Travel Choices – information for businesses, organisations and companies to provide smarter travel choices to visitors and employees.
- Provides information and links to Act on CO₂, encouraging people to get involved.
- Provides information to the public on car sharing and car clubs, walking, cycling and more.
- Walking Buses and Travelling to School projects designed to provide the public about school transportation.
- Guidance for Schools and Local Authorities for public transportation, and how to make local transportation and provide options for sustainable travel.
- In Town without My Car scheme (backed by European Commission) to open up town and city centre streets to pedestrians.
- Bike Week 2009 and further cycling incentives for the public.
- Sustainable Transport Guidance – published a report with the following guidance and recommendations for businesses:
 - Comprehensive direct networks for walking, cycling and public transport;
 - Situating key services such as health centres and schools in central locations within the town;

- Inclusive street environments that aim to integrate the activities of pedestrians, cyclists and motorists;
- Car free, pedestrianised shopping areas served with direct cycle routes and public transport.

Streetcar

- Provides cars in central London locations with fixed rates for access (membership required).
- Used in conjunction with councils in London and expanding to other parts of the UK.

Please note that Streetcar is an independent company.

Newride

- Scheme set up in partnership with TFL and Mayor of London, Clear Zones and Camden Council, which is a website initiative to provide information to users and buyers of electric vehicles in London, including guides, model information, UK dealers and more.

Energy Saving Trust

- Provide a section on environmentally-friendly travel on their website, which features a host of hints and tips for making visitors transport more sustainable, including public transport and personal cars.

Liftshare & Freewheelers

- Free social networks that help individuals to travel more sustainably by sharing their journeys with other individuals who would be making the same journey.

Please note that Liftshare and Freewheelers are independent companies.

NWDA - Northwest Regional Development Agency

- Salford City Council are enhancing their Metrolink services, including three new lines, 17 new stops and doubling current services to 10 trains at peak times. This is expected to take 5 million car journeys off the roads each year and increase the number of tram trips from 55,000 to 90,000.
- Direct Rail Services' collaboration with Tesco to transport goods by rail which has saved around 6,000 tons of CO₂ per year.
- Windermere Enhancement Project which consists of a public space, signage and traffic management improvement scheme, encouraging visitors to explore towns on foot and support local businesses.
- Warrington Bank Quay Station Improvements including upgrade of station, extra car parking, storage spaces for bicycles and sponsorship from NWDA for the bus service between train station and town centre.

- Faith4Change environmental initiative to encourage volunteers from faith communities to collaborate with local residents on environmental projects.

Yorkshire Forward

- Have reintroduced their carpooling initiative and have placed satellite navigation systems into staff cars to reduce lost mileage, and changed types of their vehicles to more economically and environmentally sustainable versions.
- Video conferencing has been made available for staff in authority buildings to reduce travelling.
- Car parking spaces have been made very limited and will be made available if staff have been travelling with at least one more additional person within the car.
- Currently monitoring flights for research to provide recommendations on what they need to reduce.
- New targets including reduce mileage, promoting sustainable travel choices, promoting car pools at full capacity, improving ICT and communications to reduce travel requirements and establishing a system for recording all rail and air mileage.

Advantage West Midlands

- Birmingham New Street Station redevelopment and enlargement projects, creating new jobs, increasing capacity, improving passenger experience and alleviating the strain on rail services.
- Birmingham International Airport Runway Extension and Surface Access project, improving international connectivity and improving public transport.
- M5/M6 Capacity Improvements and Motorway Box Active Traffic Management schemes, increasing the capacity around Birmingham Motorway Box.
- Rail Freight Upgrades, allowing a greater volume and proportion of freight to be transported by rail, thereby reducing road haulage, enabling better use of highway capacity and improving productivity.
- Regional Rail Capacity is being developed with a new infrastructure, longer trains and platforms, new stations and improved integration with local public transport and park and ride schemes.
- Black Country 'Strategic Transport Spine' project, which is a package of 8 projects to provide public transport improvements around the Black Country.
- North Staffordshire Integrated Transport package, of 6 potential public transport and regeneration proposals, including working with Streetcar, improving links between residential areas, urban centers, regeneration sites, and development of City Centre public transport interchange, improvements on Stoke railway station and improvements to M6 junction 15.

- New Growth Points/Settlements of Significant Development providing a variety of public transport and highway schemes (28 projects) which integrate with other regional transport priorities and will support sustainable growth in new areas of regeneration and development.

- Smarter Choices initiatives bringing about changes in travel behavior with a package of measures

East Midlands Development Agency (EMDA)

- Exploring the improvement of freight movement in the region, promoting investment in regional rail infrastructure improvements
- Assessing the viability of public transport improvements directly to East Midlands Airport
- Securing public transport improvements in rural and urban areas to improve accessibility,
- Working in partnership to deliver on priorities for transport infrastructure and service enhancement improvements
- Investing in Skylink Bus services to East Midlands Airport from Nottingham and Leicester.

East of England Development Agency (EEDA)

- In process of developing green travel plans, and has included in its aims: creating a resilient transport that is used effectively and efficiently, investing in transport to maximize economic growth, increasing economic benefit to the East of England from major international gateways, reducing the environmental impact of moving goods and people

South West of England Regional Development Agency

- Continuing work with region's airports improve surface access to airports and the environmental footprints of airports as businesses, for example by sourcing their energy from renewables
- Working with the West of England authorities to progress sustainable transport measures including smart cards for public transport journeys and individual travel marketing campaigns which will be based around the greater Bristol bus network improvements. The initiatives will strengthen and complement the work of authorities in implementing the Joint Local Transport Plan and will also provide useful experience for others to learn from.
- Bristol was also successful in becoming a Cycle City sharing £100 million investment with 11 other towns around the country in improved cycling facilities, dedicated cycle lanes, training and information.

South East England Development Agency – SEEDA

- Works alongside Checklist South East and covers the following sections:

- Encourage and enable the access and use of public transport
- Promote the use of virtual communications as an alternative to transport where possible
- Ensure availability of frequent and convenient public transport links to train, tram or tube, including waiting areas for safe and out of weather situations
- Reduce levels of car parking available as an incentive to use public transport and other methods of mobility and communication
- Provide flexible space which can accommodate other uses outside the areas of peak parking demand
- Reduce impact of heavy goods vehicles loading on public highways
- Promote cycling as a real alternative to private cars, reducing the fear of crime for cyclists
- Reduce the need or requirement to travel by car to essential facilities by having them within reasonable walking distance
- Reduce residents' dependency on private car ownership and use with a community car club.

Appendix II: Anecdotal Positive and Negative Feedback from Coach Travellers to Festivals

Appendix II: Anecdotal Positive and Negative Feedback from Coach Travellers to Festivals

POSITIVE FEEDBACK

I think it was a good idea to have the combination tickets so that people purchasing these tickets had to travel by coach, I think it would be good if something similar could be done for travelling by train.

Coach from my home town was brilliant.

The coach service was better than I expected it to be and was easy to use.

I was very impressed with the coach operations getting to and from the concert.

Travel to the festival was easy and stress free and I would definitely choose to travel by coach when I attend the festival next year.

Big improvement on last year, the coach staff were very friendly, patient and helpful.

I felt that the transport to the festival was very good and would highly recommend it to new festival goers.

Coach travel is a lot more appealing as the coach takes you directly to the festival entrance, unlike having to find the car park and walk for miles.

The coaches were on time, which came as a pleasant surprise considering what I'd heard on the grapevine. Well done!

Coach was brilliant, easy and really stress free, especially on the way home.

This was the first time I had travelled by coach as I would normally go by car, but the coach packages were the only festival tickets left. I would definitely consider it again though as it was convenient and meant I didn't have to drive home tired! Was a little on the expensive side though.

The festival was amazing and the coach travel took away a lot of the hassle!!

Festival was great; coach service was speedy and reliable.

Getting the coach this year to the festival was probably one of the easiest journeys I've had getting to a festival. Though it would have been nice to have an option on the time we travelled.

I choose to travel by coach this year with a combined ticket. Travelling by train is too much hassle and the coaches were on time and easy to find. I'd definitely travel by coach next year, however a choice over arriving and leaving times would improve the service!

NEGATIVE FEEDBACK

Coach drivers should be clearly told which route to take to get to the coach drop off point. We were sat in the wrong queue for around 2 and half-hours only to be told to turn around and go another way.

More information when purchasing the ticket from the supplying website.

Make coach tickets cheaper.

Some kind of agreement or sponsorship with the train company to improve train prices would be fantastic!

There was nothing on the coach tickets that provided the information once I had arrived at the bus station. This was the same for everybody else who was at the bus station, trying to locate the correct bus stand. The coach service was terrible. We were not dropped off at the entrance of the festival and had to walk with our things. Also we were not dropped back at correct stop when arriving back in our hometown. We will not be travelling by coach again because of the appalling service that we received and the expense.

The coach was very good except for two things – it dropped us miles from the camp site and I could hardly carry my stuff, and there wasn't enough room for peoples luggage and loading/collecting were an unsupervised scrum so I lost my blow up mattress on arrival – which makes me think I'd rather go by car next time as your stuff then can't get damaged or stolen. If these problems can be sorted out then coach is definitely the best option.

I didn't like how you had to look after your coach ticket all weekend to be able to get back on the coach, I think it would be better to get like a wrist band or something so it is easier to look after it and not lose it.

Coaches should be available to people wishing to go earlier in the week or to get there early on the day stated as to [sic] relax and settle in instead of a big rush to find suitable camping areas.

Give coaches special lanes, so they do not have to queue in the same line as cars.

I feel that people using public transport should get preferential camping, as by the time we arrived, most of the campsites were full.

Appendix III: Research Surveys

- i. Promoter
- ii. All Festival Goer Attitudinal
- iii. Coach Festival Goer Attitudinal – version 1
- iv. Coach Festival Goer Attitudinal – version 2

Festival Audience Travel Survey – For Promoters/Organisers

Q1: Contact Name:

Q2: Festival Name:

Q3: Total Number of Tickets Sold:

Q4: Breakdown of Tickets by type:

<input type="text"/>	# of Day Tickets
<input type="text"/>	# of Day Tickets with Public Transport by Coach
<input type="text"/>	# of Day Tickets with Public Transport by Train
<input type="text"/>	# of Day Tickets with Car Parking Pass
<input type="text"/>	# of Multi-Day Tickets with Camping
<input type="text"/>	# of Multi-Day Tickets with Camping and with Public Transport by Coach
<input type="text"/>	# of Multi-Day Tickets with Camping and with Public Transport by Train
<input type="text"/>	# of Multi-Day Tickets with Camping and with Car Parking Pass

Q5: How much do you charge for car parking?

Q6: How much per vehicle?

Q7: Do you offer festival-goers the option of carbon offsetting their travel?

Q8: Number of people signed up to liftshare groups (via event website):

Q9: Do you offer any particular incentives for the use of public transport?

Q10: What issues do you foresee in increasing public transport uptake with your festival-goers?

Q11: What issues do you foresee in increasing lift-share scheme uptake with your festival-goers?

Q12: What do you think would be effective at getting more festival-goers to use public transport?

Q13: What do you think would be effective at getting more festival-goers to use lift share schemes?

Q14: Do you know what your audience travel generated CO2 emissions are from your festival for 2008?

Q15: If so, what was it?

Q16: Do you have a travel strategy for managing and reducing emissions from audience travel?

Q17: If not, would you be prepared to develop one?

Q18: Would industry-wide target setting for festival travel emissions reductions be helpful?

Q19: Should festival transport guidelines/best practice be made available for all festivals?

Q20: How would you describe the music genre/s in your festival?

Q21: How would you describe the characteristics of the majority of your audience? (for example, age, gender, ethnicity, religion, etc)

Appendix III: Research Surveys

ii. All Festival Goer Attitudinal

Audience Travel Survey Questionnaire

Section A: Travel to the Festival - All participants

- 1) What town/city did your journey to (INSERT festival) start?
 - a. Name town/city: _____
- 2) What town/city will you travel to after the (INSERT festival)?
- 3) What transport options are you aware of being available for getting to and from (INSERT festival)? **Prompt**
 - Car
 - Car lift share scheme
 - Coach
 - Local bus service
 - Train
 - I am not sure
- 4) How did you primarily travel to the festival?
 - a. By car with people I know (*now go to Section B*)
 - b. Participated in car lift share scheme (*now go to Section B*)
 - c. Train (*now go to section C*)
 - d. Coach (*now go to section C*)
 - e. Local bus (*now go to section D*)
 - f. Plane (*now go to section D*)

Section B: Car travellers only

- 5) How many people travelled in the car including yourself?
 - a. Number: _____
- 6) Were any of the passengers picked-up on route to the festival?
 - a. Yes b. No
- 7) How did you know the other passengers?
 - a. Friends Family
 - b. Through the car lift share scheme
 - c. Other: _____
- 8) How far in advance did you start planning your travel to and from the festival?
 - a. When purchasing the festival ticket
 - b. More than 2 months
 - c. Between 2 and 1 month
 - d. Less than 1 month
- 9) Do you know the approximate fuel cost for driving to and from the festival?
 - a. Less than £20
 - b. £20 to £50
 - c. £ 50 to £80
 - d. More than £80
 - e. I don't know
- 10) Is this fuel cost being split between passengers?
 - a. Yes b. No

Section C: Train and Coach Travellers only

- 11) How far in advance did you purchase your (INSERT TRAVEL MODE) tickets?
 - a. When purchasing the festival ticket
 - b. More than 2 months
 - c. Between 2 and 1 month ago
 - d. Less than 1 month ago
- 12) How many people are you travelling with that you know?
 - a. 0
 - b. 1
 - c. 2
 - d. 3
 - e. 4 or more
- 13) Is this the first time you have used public transport to travel to a festival?
 - a. Yes b. No

- 14) There was sufficient flexibility in choosing the times when I wanted to arrive and leave the festival site. To this statement do you:
- Strongly agree
 - Agree
 - Disagree
 - Strongly disagree
 - I don't know
- 15) Do you think your travel to and from the festival will have cost you less than if had you travelled by car?
- Yes
 - No
 - I don't know
- 16) I think the public transport service to the festival has been...
- Very good
 - Good
 - Poor
 - Very poor
- 17) If attending this festival again, how likely is it that you will travel to it again on public transport? (**Go to section D**)
- Very likely
 - Somewhat likely
 - Probably unlikely
 - Very unlikely

Section D: Travel planning information - To be completed by all survey participants

- 18) Did you visit the festival's website to get travel information?
- No (**Go to question 23**)
 - Yes (**Go to question 19**)
- 19) What travel information were you looking for? **Prompt**
- Road directions
 - Parking
 - Public transport options
 - Sign-up to a car lift share scheme
 - All of the above
 - None of the above
- 20) To the following statements do you - strongly agree; agree; disagree; strongly disagree; or don't know:
- _____ The website had good information about the public transport options
- _____ The website had good information about any car lift share schemes
- 21) Before going to the festival website had you already decided the mode of transport you would use?
- Yes
 - No
- 22) Do you think information about public transport and car lift share scheme on the festival's website would motivate you to travel using one of these options?
- Yes
 - No
- 23) Did you visit any of following types of websites in planning your travel to and from the festival? (Yes/No)
- _____ Road directions
- _____ Train operators
- _____ Coach operators
- _____ General festival information websites (e.g. efestival or Virtual festival)
- _____ Other (list)
- 24) How highly does transport costs factor into your decision for how you will travel to the festival?
- Very highly
 - Highly
 - Somewhat highly
 - Not highly
- 25) Which of the following transport modes do you think is the **most expensive** way for you to travel to and from this festival?
- Car with friends
 - Car as part of a lift share scheme
 - Coach
 - Train
 - I don't know

- 26) Which of the following transport modes do you think is the **least expensive** way for you to travel to and from this festival?
- Car with friends
 - Car as part of a lift share scheme
 - Coach
 - Train
 - I don't know

Section E: Awareness and attitude to car lift share schemes - To be completed by all survey participants

- 27) Have you used a car lift share scheme for festival travel?
- Yes (**Go to question 28**)
 - No (**Go to question 31**)
- 28) Did you...
- Offer others a lift
 - Ask for a lift
 - Both
- 29) What was your experience of the lift share scheme?
- Very positive
 - Positive
 - Negative
 - Very negative
- 30) Would you consider participating in a lift share scheme again?
- No
 - Yes
- 31) To the following statements do you - strongly agree, agree ; strongly disagree; disagree; ; I don't know:
- _____ Lift shares is a good way to reduce the number of cars driving to a festival
- _____ It is not safe for people who do not know each other to share a car journey
- _____ Lift sharing is more hassle than it is worth
- _____ I would consider asking for a lift through a lift share scheme
- _____ If I was driving I would consider offering others a lift through a lift scheme
- _____ The festival promoted well how to sign-up to a lift scheme
- 32) Which **2 incentives** do you think would **best encourage** you to participate in a lift share scheme?
- Lower car parking rates
 - Preferential treatment for camping sites
 - Vouchers = t-shirt, music, food or beer to claim at the festival
 - Good information about how to join a lift share scheme
 - Other: _____
 - None of the above
- 33) If you were coming to this festival again, how likely is it that you would consider participating in a lift share scheme?
- Very unlikely
 - Unlikely
 - Likely
 - Very likely
 - I don't know

Section F: General transport related-attitude questions - To be completed by all survey participants

- 34) Which **2 incentives** would **best encourage** you to travel by public transport?
- A discount my public transport ticket
 - Preferential treatment for camping sites
 - Charge for car parking
 - Ability to rent camping gear at low cost on-site
 - Vouchers = t-shirt, music, food or beer to claim at the festival
 - Good information about the public transport options
 - Other: _____
 - None of the above
- 35) If you were coming to this festival again, how likely is it that you would consider travelling by public transport?
- Very unlikely
 - Unlikely
 - Likely
 - Very likely
 - I don't know

- 36) If your travel to a festival is 100 miles, which of these options causes **the least** carbon emissions, going in a...
- Car with 2 people
 - Coach
 - Train
 - I don't know
- 37) I think the festival organiser has done a good job of promoting and encouraging festival goers to use public transport options. To this statement do you...
- Strongly agree
 - Agree
 - Disagree
 - Strongly disagree
 - I don't know
- 38) I would be willing to pay an additional £2 on my festival entrance ticket if this money was used to improve public transport services. To this statement do you...
- Strongly agree
 - Agree
 - Disagree
 - Strongly disagree
 - I don't know
- 39) Festival goers travelling on public transport should get a discount on the festival entrance ticket. To this statement do you...
- Strongly agree
 - Agree
 - Disagree
 - Strongly disagree
 - I don't know

Section F: General information - To be completed by all survey participants

- 40) What type of entrance ticket do you have?
- A weekend ticket
 - A day ticket
 - Other: _____
- 41) Have you been to this festival before?
- Yes
 - No
- 42) How likely is it you will come again to this festival?
- Very likely
 - Likely
 - Unlikely
 - Very unlikely
 - I don't know
- 43) On average how many festivals do you attend each year?
- This is my first
 - At least 1
 - At least 2
 - More than 3
 - I don't go to a festival every year
- 44) Gender
- Male
 - Female
- 45) Age
- < 18 years old
 - 18-24 years old
 - 25-34 years old
 - 35-44 years old
 - 45-54 years old
 - 55-64 years old
 - Over 65 years old
- 46) What is your occupation? _____

Other: Do you have any further comments you would like to add?

Survey prepared by Catherine Bottrill (ECI), Meegan Jones (Festival Republic), Helen Heathfield (Julie's Bicycle) and Andrew Haworth (Live Nation), June 2008.

Appendix III: Research Surveys

iii. Coach Festival Goer Attitudinal – version I

V Festival Audience Travel Survey

Thank you for travelling with National Express coaches to a recent event.

We would appreciate it if you would spend a few minutes answering some questions about your journey and booking with National Express.

Q1: What is your gender?

Q2: What is your occupation?

Q3: Which of the following best describes your age?

Q4: What ticket type did you purchase?

Q5: Which of the following influenced your decision to travel by coach? Please tick all that apply.

Q6: Do you think there was sufficient flexibility in the choice of arrival and departure times to and from the festival site?

Q7: Thinking about your journey; how satisfied were you with the following aspects of National Express:

	Very Satisfied	Somewhat Satisfied	Neither Satisfied nor Dissatisfied	Somewhat Dissatisfied	Very Dissatisfied	Not Applicable
Booking Service						
Facilities at origin departure point						
Staff at origin departure point						
Driver						
Driver announcements						
Coach comfort						
Coach Cleanliness						
Signage to coach park from event						
Facilities at event departure point						
Staff at event departure point						
Value for money						
Overall experience of National Express						

Q8: Do you think the festival organisers are doing enough to encourage people to travel to the festival by public transport?

--

Q9: If festival organisers wanted to encourage you to travel to events/festivals by public transport, which TWO of the following incentives would encourage you to leave your car at home:

--

Q10: To what extent do you agree with the following:

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
National Express should offer combined event and coach travel tickets					
I would purchase combined event and coach travel tickets through					

and coach travel tickets through
National Express

Q11: Would you recommend National Express to a friend or relative?

Q12: Have you recommended National Express to a friend or relative?

Thank you for taking the time to complete our survey.

Appendix III: Research Surveys

iv. Coach Festival Goer Attitudinal – version 2

Festival Audience Travel

1. A Survey About Your Festival Travel

WIN 2 TICKETS TO READING or LEEDS FESTIVALS 2009* by completing this short survey, which has been sent to a random sample of people that travelled by coach to Reading and Leeds festivals via See Tickets. Your responses will contribute to our study into audience travel to festivals. All responses will be anonymised and aggregated.

In addition to Leeds and Reading Festivals, a number of other festivals are participating in this study: Download, Glastonbury, Hyde Park Calling, T in the Park, Oxegen, Latitude, Global Gathering, Cambridge Folk Festival, and The V Festivals. The information from the surveys will be analysed by Oxford University's Environmental Change Institute on behalf of Julie's Bicycle.

Julie's Bicycle is a not for profit company established to find ways to reduce the UK music industry's greenhouse gas emissions. If you would like to learn more please visit our website: www.juliesbicycle.com

Thank you for contributing to the study!

*The prize draw will award 2 tickets for Reading Festival and 2 tickets for Leeds festival. You will be eligible for one set of 2 tickets only. If you attended Reading 2008 you will be entered into the draw for 2 free tickets for Reading 2009. If you attended Leeds 2008 you will be entered into the draw for 2 free tickets to Leeds 2009. Full Terms and Conditions available at the end of this survey.

2. Section A: Travel to the Festival

1. Which festival did you go to?

Reading Festival

Leeds Festival

* 2. What town/city did your journey to the festival start from?

* 3. What town/city did you travel to on leaving the festival?

4. What transportation options were you aware of being available for getting to and from the festival?

Car

Car liftshare scheme

Coach

Local bus services

Train

I am not sure

3. Section B: Coach Travel

Festival Audience Travel

5. What type of coach ticket did you travel on?

Combined coach and festival entrance ticket

Coach ticket only

6. Why did you choose to travel by coach? Click appropriate box(es)?

Only combined coach and festival tickets were available

Convenient

Travel cost

No other travel option (i.e. I don't drive nor do my friends)

Good information was given about coach travel

Other (please specify)

7. How far in advance did you purchase your coach ticket?

When purchasing my festival entrance ticket

More than 2 months ago

Between 2 and 1 month ago

Less than a month ago

8. Did you travel with friends?

No

Yes

9. Was this the first time you travelled by coach to a festival?

No

Yes

10. "There was sufficient flexibility in choosing the time when I wanted to arrive at the festival." - To this statement do you:

Strongly agree

Agree

Disagree

Strongly disagree

I don't know

Festival Audience Travel

11. "There was sufficient flexibility in choosing the time when I wanted to leave the festival." - To this statement do you:

- Strongly agree
- Agree
- Disagree
- Strongly disagree
- I don't know

* 12. I thought overall the coach service to and from the festival was...

- Very good
- Good
- Okay
- Poor
- Very poor
- I don't know

Other (please specify)

13. Do you think travelling by coach cost you less than travelling by car with a friend?

- No
- Yes
- I don't know

14. If attending this festival again, how likely is it that you will travel by coach?

- Very likely
- Somewhat likely
- Probably unlikely
- Very unlikely
- I don't know

4. Section C: Travel Planning

15. Did you visit the festival's website to get travel information?

- No
- Yes

Festival Audience Travel

16. To the following statements do you - strongly agree; agree; disagree; strongly disagree; or I don't know:

	Strongly agree	Agree	Disagree	Strongly disagree	I don't know	Not applicable
The website had good information about the public transport options available.	<input type="radio"/>					
The website had good information about car liftshare schemes.	<input type="radio"/>					

17. Before going to the festival website had you already decided the mode of transport you would use?

- No
- Yes
- Not applicable

5. Travel Planning Continued.

18. Did you visit any of the following types of website in planning your travel to the festival?

- Road directions
- Train operators
- Coach operators
- General festival websites
- Other (please specify)

19. How highly do you rate costs in your decision for how you travel to the festival?

- Very highly
- Highly
- Somewhat highly
- Not highly
- I am not sure

Festival Audience Travel

20. Which of the following transport modes do you think is the most expensive way for you to travel to and from the festival?

- Car with 3 people
- Coach
- Train
- I don't know

21. Which of the following transport modes do you think is the least expensive way for you to travel to and from the festival?

- Car with 3 people
- Coach
- Train
- I don't know

6. Section D: Transport Attitudes

22. Which transport mode do you think causes the least carbon emissions, per person travelling 100 miles?

- A car with 2 people
- Coach
- Train
- All of the above result in equal carbon emissions
- I don't know

23. Who do you think should be most responsible for reducing festival goers' travel related carbon emissions?

- Festival organisers
- Festival goers
- Local Authorities
- National Government
- Transport operators
- I am not sure

Festival Audience Travel

24. Do you think the festival organisers are doing enough to encourage people to travel to festivals by public transport?

No

Yes

I don't know

* 25. Which 2 incentives would best motivate you in future to travel by public transport to a festival?

A discount on your transport ticket

Preferential treatment for camping sites

Charges for car parking

Ability to rent camping equipment at low cost on site

Vouchers to use towards t-shirts, music, food or beer at the festival

Good information about the available public transport options

None of the above

Other (please specify)

26. "I would be willing to pay an additional £2 on my festival entrance ticket if this money was used to improve public transport services." - To this statement do you:

Strongly agree

Agree

Disagree

Strongly disagree

I am not sure

27. Festival goers travelling by public transport to festivals should get a discount on their festival entrance ticket. To this statement do you...

Strongly agree

Agree

Disagree

Strongly disagree

I am not sure

7. Section F: Some information about you

Festival Audience Travel

28. Have you been to this festival before?

No

Yes

29. How likely is it that you will come again to this festival?

Very likely

Likely

Unlikely

Very likely

I don't know

30. On average, how many festivals do you attend each year?

This is my first

Less than 1

At least 1

At least 2

At least 3

* 31. Gender

Male

Female

* 32. Please indicate your age bracket:

Under 18 years old

Between 18 and 24 years old

Between 25 and 34 years old

Between 35 and 44 years old

Between 45 and 54 years old

Between 55 and 64 years old

Over 65 years old

33. Please can you tell us your primary occupation:

Festival Audience Travel

34. Do you have any additional comments you would like to make about your travel to the festival and/or any ideas for how to improve public transport services to the festival?

8. Thank You

Thank you for taking the time to complete this travel survey. Your answers will greatly help us understand how festival goers plan their travel to festivals.

Visit www.juliesbicycle.com if you would like to know more about us. If you have any questions about the research study, please email info@juliesbicycle.com.

Terms and Conditions of the Prize Draw

The competition is only open to members of the public who took part in and completed the Julie's Bicycle travel survey at the Leeds and Reading Festivals 2008.

The prize draw will award 2 tickets for Reading Festival 2009 and 2 tickets for Leeds Festival 2009.

You will be eligible for one set of 2 tickets only.

If you attended Reading 2008 you will be entered into the draw for 2 free tickets for Reading 2009. If you attended Leeds 2008 you will be entered into the draw for 2 free tickets to Leeds 2009.

Employees, contractors, agents and other staff of Festival Republic Limited or other companies employed by or contracted to Leeds or Reading Festival as well as employees, agents or directors of Julie's Bicycle Ltd are not eligible to be entered into the prize draw.

One name will be selected at random from those eligible for the draw for each of the Leeds and the Reading festival attendees in 2008. This selection process will be adjudicated by a person independent of Julie's Bicycle and Festival Republic and will take place on 30th September 2008.

Notwithstanding the final paragraph below the adjudicator's decision on the identity of the person who has won the 2 free tickets to Leeds Festival 2009 and the person who has won the 2 free tickets for Reading Festival 2009 is final.

Julie's Bicycle Ltd will contact the winner using the information that has been provided by any eligible applicant. If Julie's Bicycle does not get a response from the potential winner of either the Leeds or the Reading tickets within fourteen (14) days of making such contact (being the day any letter was posted to a potential prize winner or the day any email or text was sent) then there will be a re-draw. Julie's Bicycle will then ask the adjudicator to select another eligible entrant and this process will continue until the prize(s) is claimed.

In the event that the Leeds Festival 2009 and/ or the Reading Festival 2009 does not take place the prize draw and the tickets will be declared invalid.

These tickets are non-transferable and there is no monetary value attached to this prize and no compensation in the event of cancellation.

35. To enter in the prize draw for the 2 FREE TICKETS to Reading or Leeds Festival next year please give your name, email and contact phone number.

Acknowledgements

Julie's Bicycle would like to thank the following people for their advice, support and expertise:

Contributors

Dr Jillian Anable
Melvin Benn
Catherine Bottrill
Meegan Jones
Stavros Papageorgiou

Guidance and input

Ben Challis,
AGreenerFestival.com
Paul Fleming, Institute of
Energy and Sustainable
Development, De Montfort
University
Andrew Haworth, Live Nation
Helen Heathfield, Julie's
Bicycle
Diana Liverman,
Environmental Change
Institute
Claire O'Neill,
AGreenerFestival.com.
Association of Independent
Festivals

Participating Festivals and Coach Operators

Cambridge Folk Festival –
Eddie Barcan (CFF), Jeff
Charnock (Pass Exchange)
Download Festival – Andrew
Haworth (Live Nation)
Glastonbury Festival – Meegan
Jones (Festival Republic)
Global Gathering – Claire
O'Neill
Hard Rock Calling – Andrew
Haworth (Live Nation)
Latitude Festival – Meegan
Jones, Melvin Benn (Festival
Republic)
Leeds Festival – Meegan Jones,
Melvin Benn (Festival
Republic)
Mandela – Andrew Haworth
(Live Nation)
National Express – Danny
Newby
Oxegen – Andrew Haworth
(Live Nation), Niall Morris
(MCD), Dylan Townsend
Reading Festival – Meegan
Jones, Melvin Benn
See Tickets – Martin
Fitzgerald, Mark Kristensen-
Bagguley
T In The Park – Geoff Ellis
(DF Concerts), Libi Jardine
(Ideas), Damien O'Donohoe
(MCD), Steve Taylor (Ideas)
V Festival Chelmsford – Bob
Angus, Dawn Woodhouse
(Metropolis Music)
V Festival Staffordshire – Bob
Angus, Dawn Woodhouse
(Metropolis Music)
Wireless Festival – Andrew
Haworth (Live Nation)

Case Study Contributors

Big Green Coaches – Joby
Russell
Big Lemon Bus – Tom Druitt
Blues On The Farm – Chris
Allwood, Julian Moores
Coachella Festival – Jenna
Eyrich (Global Inheritance)
Download Festival – Andrew
Haworth (Live Nation)
FestivalBus.co.uk – Max Lewis
Freewheelers.com – Daniel
Harris
Glade Festival – Nick Ladd
Latitude Festival – Melvin
Benn, Meegan Jones (Festival
Republic)
Liftshare.com – Cecilia
Bromley-Martin
PickupPal.com – Brent
Drewry
Peats Ridge Festival – Matt
Grant
Reading & Leeds – Melvin
Benn, Meegan Jones, John Mills
(Festival Republic)
Roskilde Festival – Thomas
Niebuhr
See Tickets/Coaches – Mark
Kristensen-Bagguley
Sunrise Festival – Daniel
Hurring
T In The Park – Ashley Miles
(DF Concerts), Steve Taylor
(Ideas)

Surveyors

Muriel Bonjean
Catherine Bottrill
John Bowker
Chloe Chilerberto
Tammy Cole
Dan Grech
Ben Johnson
Maria Mansfield
Charlotte Mittnacht
Sarah Moore
Peter Moore
Richie Moule
Ross Packman
C-Change Volunteers
Reading & Leeds Green
Messenger Volunteers
Students from De Montfort
University

Data Entry

Sarah Moore
Cassie Painter

Thanks also to:

Paul Bunting, National Express
Rob Hallet, AEG
Emily Kay, Julie's Bicycle
Paul Latham, Live Nation
Ian McInnes, National Express
Doug Smith, Live Nation
Teresa Moore, Bucks New
University
Deborah Strickland,
Environmental Change
Institute

List of figures, tables and case studies

Figures

- Figure 1: GHG emissions per annum from live music performance, by activity
- Figure 3.1: Proportion of festival goers by age category
- Figure 3.2: Proportion of festival goers by occupation category
- Figure 3.3: Annual festival attendance frequency
- Figure 3.4: Transport mode split by festival location
- Figure 3.5: Money spent on fuel per car
- Figure 3.6: Perception of public transport service by public transport users
- Figure 3.7: % of festival goers to consider travelling on public transport next time
- Figure 3.8: Type of travel information festival goers are looking for on the festival website
- Figure 3.9: Good information on the festival websites about the public transport options and car liftshare scheme
- Figure 3.10: How highly does cost influence festival goers' travel choice
- Figure 3.11: Festival goers' perception of the most and least expensive transport mode
- Figure 3.12: Preferred incentives for motivating use of public transport or car liftsharing
- Figure 3.13: The transport mode thought to cause the least carbon emissions
- Figure 3.14: Festival goers view of who is most responsible for travel emissions
- Figure 3.15: Perception on whether the Promoters did a "Good Job" promoting public transport options
- Figure 3.16: Festival goers' willingness to pay £2 to improve public transport services
- Figure 3.17: Festival goers' view on whether public transport users should get a ticket discount

Tables

- Table 2.1: Characteristics of festivals participating in the study
- Table 2.2: Surveys run at each festival
- Table 3.1: Travel information, incentives and disincentives given to festival goers
- Table 3.2: Awareness of public transport options
- Table 3.3: Awareness of public transport options by mode use
- Table 3.4: Average number of people per car
- Table 3.5: Other types of websites visited for travel information

Case Studies

- 1: Blues on the Farm, The Big Lemon Bus
- 2: Burning Man Festival
- 3: Coachella Festival, The Coachella Express
- 4: Download Festival
- 5: Festivalbus.co.uk
- 6: Glade Festival, Big Green Coach
- 7: Latitude Festival
- 8: Liftshare.com, Freewheelers.com
- 9: Peats Ridge Festival
- 10: PickupPal
- 11: Roskilde Festival
- 12: Reading & Leeds Festivals
- 13: Sunrise Festival
- 14: T in The Park
- 15: The Royal Shakespeare Company, Chiltern Railways





ENVIRONMENTAL
CHANGE INSTITUTE

Festival
REPUBLIC.

LIVE NATION



JULIE'S BICYCLE * * * *
TAKING THE HEAT OUT OF MUSIC

info@juliesbicycle.com

www.juliesbicycle.com