

What effects do UK music festivals have on the environment & how can they become more environmentally friendly?

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Abstract:

UK music festivals are becoming ever more popular; between 2003 and 2007 the number of festivals increased by 70% (Tickle, 2011). As a consequence, the negative effects that festivals have on the environment have dramatically increased.

Over the last few years both festival organisers and festival goers have become more aware of the negative effects that festivals have on the environment. Safeconcerts (2008) says 56% of festival goers thought that CO₂ emissions were a problem, up from just 31% two years previously.

However, with festival organisers facing issues such as very large sites, huge temporary tented populations, being remote from adequate infrastructure and often from public transport (Glastonbury 2013), makes becoming more environmentally friendly a much bigger problem and, therefore, more difficult to deal with effectively.

There is a need to investigate the environmental impacts of festivals and to explore what options exist for decreasing them.

1.1 Aim and Objectives

Aim:

To investigate the various ways festivals impact the environment and to identify options for them to become more environmentally friendly

Objectives:

- To identify the environmental impacts of festivals;
- To identify the possible ways that the negative environmental impacts of festivals can be reduced;
- To estimate the impact of those changes on festival organisers, festival goers and other people involved;
- To identify the potential benefits from such changes, in order to incentivise organisers to implement them and attract festival goers, whilst lowering environmental impact.

Scope of Project

Secondary research will identify possible environmental effects of festivals and options to minimise their impact. Primary research will then be undertaken to identify the most beneficial options as perceived by festival goers.

All music festivals in the UK will be within the scope of the project, however only a sample will be included due to their number and time constraints for the project.

Music festivals throughout the rest of the world will be out of scope, because the focus is on UK music festivals. Effects other than environmental ones, unless they are relevant to the research question, will not be included either.

2.1 Literature Review

In an online article in *The International*, Rolfe (2013) outlined the paradoxical relationship between music festivals and environmentalism.

“Recent years have witnessed a growing convergence between the expanding music festival scene and environmental activism surrounding the issues these festivals can give rise to. This development has followed from the realization that music festivals can be, on the one hand, grossly unsustainable and excessively consumptive, while, on the other hand, a great medium through which to spread the message of environmentalism. ... But behind this picture lurks an issue that activists and festival organizers have been doing battle with for decades: the quest for good environmental practice, among both organizing parties and festival attendees.”

2.2 Emerging Themes

Although festivals, in themselves, will always have a negative impact on the environment, the above statement indicates that they can also be used as a platform to mitigate the negative effects that people have on the environment, not only during the festival, but also in their daily lives. This can be done through example (e.g. having recycling bins at festivals) but also through education. Camp Bestival (2014) supports over 40 charities each year with representatives from all of them at the festival. This enables festival goers' to be educated on

different issues (environmental and others) leading to possible changes in behaviour when they leave.

This will allow festivals to offset the positive impacts festival goers make through changing their behaviour at home against the festivals' negative impacts. This is called carbon neutral, the concept that activities which cannot be made more efficient, and all remaining emissions from activities designed to work with maximum efficiency, can be offset by financing an activity which causes an emission reduction outside the festival's boundaries (The European Festival Association, 2014).

A study by Robertson et al (2009) shows that only 30% of event managers, including festival organisers, rated the sustainability of the environment in which their event took place significant. However, Robertson and Rogers (2009) & Vital Festivals Annual Census (2009 cited by Watson et al. 2009) show that the environmental impact of festivals is perceived as an important issue to the festival goers. This shows that the need for festivals to reduce their negative impact on the environment is pushed mainly by festival goers' rather than organisers and that in doing this could cause the festival to become more sustainable not only in environmental terms but also in terms of the lifecycle of the festival.

Getz and Anderson (2008, cited in Ensor et al. 2011) state that in order for a festival to be sustainable the organisers will "have to engage in the minds and sentiments of the audience as political agents." They say that "sustainability can be formed by the growth of a festival in the minds and hearts of the audience". Thus unless a festival addresses issues that festival goers find important that festival will be less sustainable as the festival goers will choose alternatives better meeting their desires. Therefore, addressing these issues through changing the behaviour of both festival organisers and festival goers, towards that of a more environmentally friendly nature is essential for festival sustainability.

2.3 Current Environmental Effects

"The spiritual high that people get across the nation, and the moral integrity of the crowd, outweighs the environmental impact. We've always minimised the damage. But if you switched off everything that created carbon, we'd be bored to tears."

Michael Evis, talking on behalf of Glastonbury to the Independent (2014)

Even some newer music festivals, like Wychwood, who work very closely with the charity Friends of the Earth and aims to do as little harm to the environment as possible, say that "*being carbon-neutral is fanciful*" Wychwood's Graeme Merrifield, talking to the Independent (2014)

The above statements clearly show that even a festival like Glastonbury, which is very conscious of its environmental impact, cannot operate without having a negative effect on the environment.

According to the Gray (2013) there are five main areas in which festivals have a damaging effect on the environment:

Transport

Research conducted by Oxford University shows that 500 UK festivals produce 84,000 tonnes of CO₂ a year (The Guardian. 2010). CO₂ comes from generators producing electricity and trucks bringing water, scaffolding and toilets to and from the festival site. However, it is agreed

that largest component is caused by festival goers travelling to and from the festival site (Atkinson, 2010).

Waste

One in five tents are dumped on site, plus roll mats, sleeping bags, air beds and other paraphernalia creating tonnes of plastic and metal which needs to be sent to landfill every year (The Telegraph, 2013). In 2009, at Glastonbury alone 54tonnes of cans a plastic bottles, 9.12tonnes of glass, 11.2tonnes of tents and 193tonnes of compostable material including food and paper cups were left behind (Maung, 2010).

Water

There is “a direct climate change impact on water production, as pumping, delivery and waste water treatment consumes a significant amount of energy and therefore production of greenhouse gas (GHG) emissions” Jones (2010). Festivals’ awareness of water conservation is therefore important, particularly as most are held in rural areas where the livelihood of the local population depends on a sustainable water supply (Jones, 2010).

Energy

Glastonbury alone last year used 30,000 megawatts during the festival - the same as the City of Bath. (British Gas, 2013)

Toilets

Ammonia released by festival goers’ who sneak into bushes can have damaging effects on wildlife especially to fish in nearby streams. (Telegraph, 2013)

2.4 Changing current behaviour

In terms of improving the environmental effects of festivals, the festival organisers are the “choice architects” and should use “paternalistic liberalisation” to steer festival goers towards making the decisions which are considered to be right ones. In other words, they can choose the way the situation is designed in order to give the festival goers a “nudge” towards the best decision (Thaler & Sustein, 2008).

Social science shows that:

“Individuals make pretty bad decisions – ones they would not have made if they had paid full attention and possessed complete information, unlimited cognitive abilities and complete self-control” ... “choice architects are not merely trying to track or to implement people’s anticipated choices. Rather they are attempting to move people in directions that will make their lives [or the environment] better. In a word, they nudge”.

The Milken Institute Review (2008)

This indicates that festival organisers can design situations to nudge festival goers towards decisions which will have less of a negative impact on the environment. In fact, some festivals have already started to do this; examples are given in section 2.5. In this context, the festival is the choice architect and the reward or incentive is the nudge.

Thaler & Sunstein (cited in Sugden, 2009) there are some general rules for identifying situations, such as decisions being infrequent and difficult, for potential beneficial nudging.

Because music festivals are infrequent occurrences for most festival goers nudges therefore could have a positive influence on festival goers behaviour in terms of their impact on the environment.

Another way to change behaviour is through education, Jackson's (2006) 4 E's model states that a catalyst is needed to change people's behaviour. Such catalysts include education and incentives aimed at changing consumer choices. Another catalyst is leading by example. If this theory is applied to festival organisers, then initiatives such as 'love the farm leave no trace' and 'love your tent' are designed to change the behaviour of festival goers to reduce their negative impact on the environment.

Verplanken & Wood (2006) research suggests that the best time to change a habit is when the individual is outside their normal routine as it is difficult to change habitual behaviour.

Therefore, festivals could potentially play a major role in changing attendees' behaviour especially considering organisers feel they are in a position to campaign for particular environmental issues (Mair & Laing, 2012). Along with this Mair's (2014) research shows that festival goers are not opposed to "proenvironmental" messages being part of their festival experience which suggests there is opportunity for festivals to play a greater role in educating and changing festival goers behaviour towards the environment.

2.5 Improving the Negative Environmental Effects

Mr. Benn (head of Festival Republic, cited by Atkinson, 2010) says "it no longer just makes environmental sense" to improve environmental performance "it makes economic sense as well." According to Lets Recycle (2014) it now costs £80 per tonne to send waste to landfill, an increase of 66.67% in four years. This is just one example of how being environmentally friendly can be more cost effective, making business sense.

In recent years festivals have introduced ways to reduce their negative effect on the environment; most have recycling bins as a minimum (Safeconcerts, 2008).

Transport

In 2011 Glastonbury introduced the "Green Traveller Initiative" where any festival goer who travels by bicycle or public transport to the festival is rewarded with discounts and prizes (Glastonbury, 2014a). Incentives designed to reduce carbon emissions through changing festival goers' transport choices for getting to and leaving the festival are becoming more and more common; Bestival (2014) even has a "Swim to Bestival" initiative where festival goers kayak, row and swim across the Solent to get to the festival to raise money for charity.

Waste

Glastonbury have also encouraged festival goers to reduce their environmental damage through their "love the farm, leave no trace" campaign (Glastonbury, 2014b). The "Love your Tent" campaign was started at the end of last year "to make the process of getting up and leaving absolutely everything behind you after the event has finished, in order for somebody else to have clear it all up, completely socially unacceptable" (Love your Tent, 2013). BoomTown Fair has introduced an EcoBond in recent years. This is a £10 deposit added to the ticket price. On the final day of the festival, festival goers have the opportunity to exchange a bag of either recycling or waste to get their £10 deposit back (eFestival, 2014 & BoomTown, 2014). This encourages festival goers to tidy up after themselves and as a result, reduces the negative environmental effects of the festival. Bestival (2014) has a similar strategy where festival goers are given recycling bags upon arrival and given a free cup of tea when it is returned, full, to the festival's Campsite Hubs. Latitude encourages festival goers' to pay a £2 deposit for a souvenir

cup which provides something more substantial to drink from and reduces the number of cups thrown away. (Atkinson, 2010)

Energy

Smaller festivals, such as Bimble Bandada, which has a capacity of 1000 festival goers, is run purely on solar energy (eFestival, 2014b). This, in terms of the actual event i.e. excluding transport, would make them virtually carbon neutral as they also use composting toilets exclusively. But even larger festivals, where 100% solar power is not feasible, have been improving efforts to decrease the negative carbon impact of energy used. Glastonbury, for example, have implemented generators which run on 100% biodiesel fuel which emits 85% less carbon than ordinary diesel powered generators (British Gas, 2013).

Glastonbury Festival organisers have also incentivised traders to invest in portable solar panels. This not only minimises the trader's commercial energy costs and reduces the need for generators, but Glastonbury also offers them a reduced pitch price once they have been installed. (British Gas, 2013)

Toilets & water

Many UK music festivals have now implemented composting toilets which have been welcomed by festival goers. These are significantly more environmentally friendly than portaloos and beneficial in terms of fuel and transportation costs. They generate a smaller amount of waste requiring removal by tank lorries than portaloos and the end product can be recycled on site (Denny, 2014). The use of composting toilets also seems to be the primary method by which most festivals are reducing water usage, which also reduces water transportation needs. Currently there is limited guidance for festivals to balance reduced water consumption against festival goers' health and safety (Denny, 2014)

Websites, such as www.agreenerfestival.com and www.juliesbicycle.com offer help and advice to festival organisers and goers on being more environmentally friendly.

2.6 Voluntary Accreditation

Both Julie's Bicycle and A Greener Festival provide help and advice to festival organisers and goers to be more environmentally friendly but have gone further by offering voluntary accreditation to festivals.

Julie's Bicycle (2013) has introduced Industry Green (IG) certification which has

"been developed by Julie's Bicycle for the music, theatre and the wider creative industries to recognise commitment and achievement in managing and reducing carbon and improving environmental performance"

Julie's Bicycle (2013)

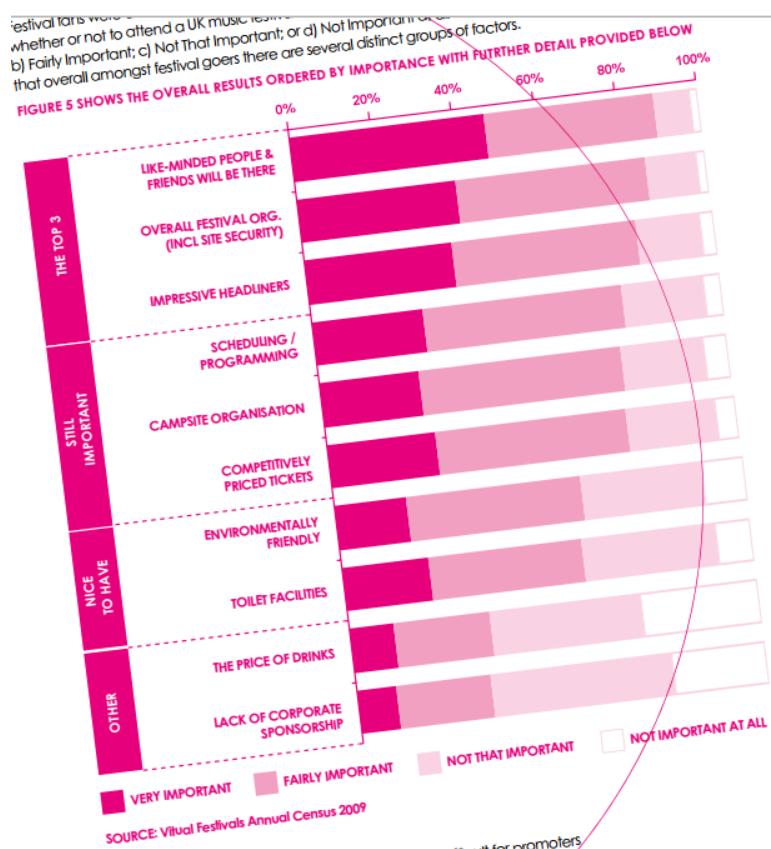
Each participant is awarded a star rating (1-3) based on commitment, understanding, improvements and communication towards environmental issues from events (Julie's Bicycle, 2013). Although it is voluntary, many well-known festivals have joined, including, Reading, Latitude, BBC Radio 1's Big Weekend, Leeds & Lovebox (Julie's Bicycle, 2014).

According to A Greener Festival (2014b) the A Greener Festival (AGF) awards are similar to the IG certification; however, they are in the form of awards. There are four classifications into which any festival can be judged. These classifications are Outstanding, Highly Commended,

Commended and Improving. If given an award, the festival has the right to use the logo for the classification awarded and through this promote their environmental credentials and attitude.

According to 10:10 (2011) is a community which started in England, but is now in over 170 countries, that encourages individuals, businesses, schools, events and venues, to decrease their carbon emissions by 10% in a year. It shares tips, blogs and information about how to make this possible and encourages others to spread the word. The festivals associated with this include Reading, T in the Park, Bestival, Lovebox, Latitude (10:10 Global, 2014). Although there is no special award upon completing the challenge, it is well publicised and will have a positive effect on brand image and reputation.

Figure 2.6



Vital Festivals Annual Census, 2009 (cited by Watson et al. 2009)

Although these accreditations are voluntary, figure 1, (Vital Festivals Annual Census, 2009, cited by Watson et al. 2009) shows that just under 20% of UK festival goers find the environmental effects of a festival very important and a further 40% find them fairly important. Although it is not mandatory for festival organisers to make their event environmentally friendly, it would be safe to suggest that it would please festival goers and would therefore encourage attendance. Therefore, participating in the voluntary accreditations could help make the festival more attractive and sustainable in the longer term.

2.7 Case Study- Love Box

Lovebox managed to reduce its emissions from energy use by 38% between 2009 and 2010 (Julie's Bicycle, 2012) whilst at the same time nearly doubling ticket sales. This meant, not only did they out do the 10:10 target (10:10 Global, 2011) but also got them a 2star rating from

Julie's Bicycle's Industry Green Assessment. They did this through having a dedicated team who made every effort to implement the strategy which Julie's Bicycle (2012) advised they implement:

- “Actively promoting public transportation to the event via the website;
- Banning all drinks from being brought on to site to reduce waste;
- Implementing a policy to enforce use of biodegradable materials by caterers as well as ensure that all coffee and tea on site is Fairtrade;
- Increasing the rate of recyclable or biodegradable drink vessels from 80% to 100%;
- Providing clear signage throughout the site to encourage recycling with an aim of recycling 50% of waste and diverting from landfill to an energy from waste plant 48% of waste;
- Ensuring that only FSC certified wood is used internally and by contractors. This is wood which is considered to be sustainably and legally harvested by the Forest Stewardship Council (FSC, 2014);
- Reducing greenhouse gas (GHG) emissions resulting from energy use by decreasing the size and number of generators on site;
- Reducing diesel consumption by 10% and replacing diesel generators with solar and hydrogen fuel cells and pure vegetable oil and bicycle power.”

They did this through researching the environmental credentials of possible contractors and their willingness to comply with the festival's environmental policy. They also gave contractors the opportunity to input their skills and knowledge to further decrease the environmental effects of the festival. Lovebox also has a page on its website informing festival goers' of ways they could reduce their negative environmental impact at the festival and encourages them to take part in environmentally friendly activities such as pedal powered sound systems (Julie's Bicycle, 2012)

2.8 Literature Review Summary

Table 2.8

Key Findings	Supporting Authors	Propositions
It is festival goers who are the main push for a reduction in the negative effects UK music festivals have on the environment.	Robertson et al (2009) Robertson and Rogers (2009) Vital Festivals Annual Census (2009, cited by Watson et al (2009))	Increased environmental awareness generally has increased consumer sensitivity to such issues when choosing between alternatives
Festival organisers must address issues that festivals goers find important in order to be sustainable	Getz and Anderson (2008, cited in Ensor et al. 2011)	Increased numbers of festivals compete for customers. To be sustainable, customer desires must be addressed.
Education changes behaviour	Jackson (2006) Mair (2014)	Providing information and examples of good behaviour will lead to changes in behaviour both at the event

		and afterward
Nudges steer festival goers towards making decisions which are considered the right ones	The Milken Institute Review (2008) Sugden (2009)	Incentives are one way of nudging for change in behaviour; Campaigns against specific activities/for improved behaviour will elicit change.
It no longer just makes environmental sense to be environmentally friendly, it makes business sense too.	Atkinson (2010)	Improved environmental behaviour helps by reducing cost and encouraging attendance
Voluntary Accreditations exist to recognise the work UK music festivals do to reduce their negative effect on the environment	Julie's Bicycle (2013) Julie's Bicycle (2014) A Greener Festival (2014b) 10:10 (2011) 10:10 Global (2014)	Independent assessment of festivals will enable progress evaluation by festivals and goers resulting in improved client awareness and attendance.
Currently, 60% of festival goers find the environmental effects of a festival important or fairly important	Vital Festivals Annual Census (2009, cited by Watson et al (2009))	Festival goers are environmentally aware and will make decisions based on the environmental credentials of a festival.

Literature Review Summary

3.1 Research Methodology

The report will use the plentiful and relevant secondary sources to assess the effect UK music festivals have on the environment. It would be unfeasible both in terms of time, skills and cost for the author to conduct primary research on the environmental effects of UK music festivals.

This report will come under the category of “problem solving” (Marczyc et al. 2005) rather than pure research as the paper aims to find solutions to environmental problems caused by UK music festivals rather than investigating what these problems are.

Primary research will be conducted by way of an online survey. This survey will explore ideas discovered in the literature review using participants’ views and opinions. This information will then be analysed and results compared with findings from the literature review in order to make recommendations at the end of the report.

3.2 Primary Research

The information will be obtained through a survey to be conducted by the author on UK music festival goers, of whom there will be 100 participating. This is a smaller sample of the total population of festival goers as that population is so large it will be unfeasible in terms of time, money and access to survey the whole population (Saunders et al. 2003). However, a sample of this size will still allow a good representation of the population as a whole.

The survey will be designed not only to draw out festival goers' opinions on environmental issues surrounding UK music festivals and what they are doing to reduce the impact but also to see how participants behaviour would change using nudges and education.

The survey will focus on the following topics:

- Demographic
- Current behaviour
- Nudging to change behaviour
- Educating to change behaviour
- And finally, the participant's knowledge of the self-accreditations festivals can take part in.

Research will be conducted using the Likert scale in order to make the results easily quantifiable for analysis. According to Jordan et al (1996) because the Likert scale simply asks the participant to agree or disagree with a statement on a scale of 1-5, the statement to which the participant is agreeing/disagreeing needs to be well thought through. The statement needs to "identify examples of things which lead to extreme expressions of the attitude being captured" (Jordan et al 2006).

The survey will be designed taking the above advice into consideration. The survey statements will be taken from information discovered in the literature review and with the above topics in mind. The only essential demographic for participants is that they have been to a UK music festival; this is so the survey shows the attitudes and opinions of those relevant to this report.

The order in which the questions have been asked has been carefully planned (see appendix 1). An example of this is question 4 and question 6: question 4 asks about the current behaviour of the participant, question 6 then educates the participant with some facts to establish if this new information would change the way they react to question 4. This information will then be analysed to explore whether education would change festival goers' behaviour. The survey will also be piloted to enable any issues to be resolved before participation begins.

In order to get the expected sample of 100 participants of the demographic needed in the time available the 'Snowball' method will be used. This method is used to reach as many potential participants as possible in a small amount of time and in a cost effective manner (Saunders et al. 2003).

The output from this research will be an analysis of festival goers' views and opinions on the environmental effects of UK music festivals and their reactions to possible ways of reducing their impact on the environment at a festival.

4.1 Analysis

This section will explore data collected from the survey and then draw together the findings from the survey conducted and the literature review in order to conclude the research and make recommendations on the environmental effects of UK music festivals and how to reduce the environmental impacts of them.

The answer to each question, represented as a figure from 1 – 5 . 1 represents strongly disagree, ascending to 5 which represents strongly agree. Participants who answered 1 to Q2 which shows the participant has never been to a UK music festival and therefore do not fit the demographic of the survey so have not been included in analysis.

4.2 Findings

Figure 4.2(a) – Survey Analysis 1

On average, how many UK music festivals do you attend a year?

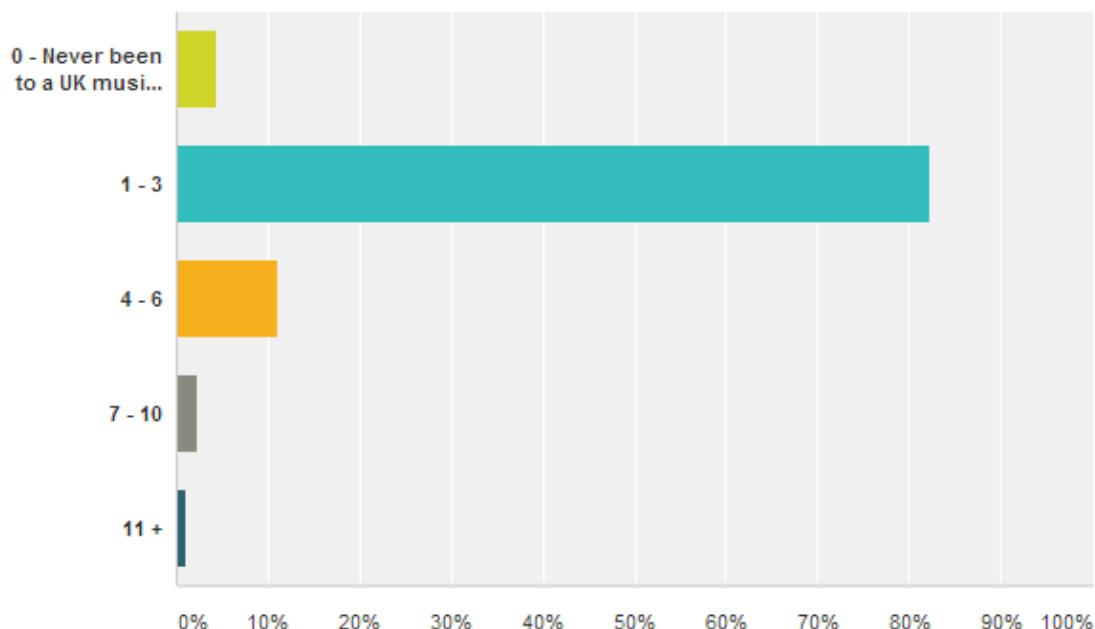


Figure 4.22(a) shows how many music festivals participants attend on average per year. Having the “0 – never been to a UK music festival before” option allows the people who aren’t in the survey demographic (i.e. people who haven’t been to a UK music festival) to be easily eliminated during analysis.

The following analysis is based on the results of the survey excluding the 4 non-festival participants.

Figure 4.2(b) - Survey Analysis 2.1
Analysis 2.2

I take steps to reduce my negative impact on the environment at a music festival such as taking my tent with me when I leave, cleaning up my litter and using public transport to travel to a from a festival.

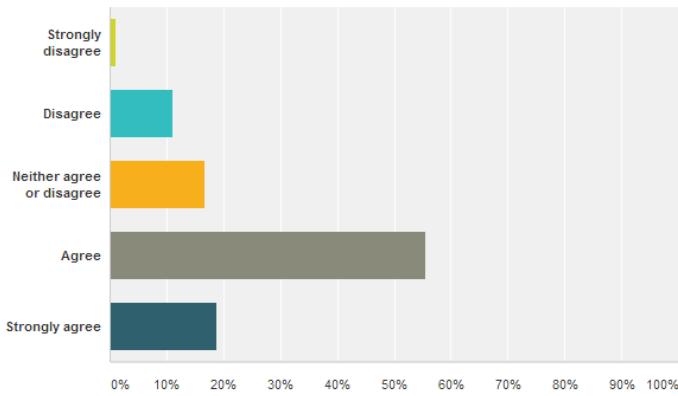
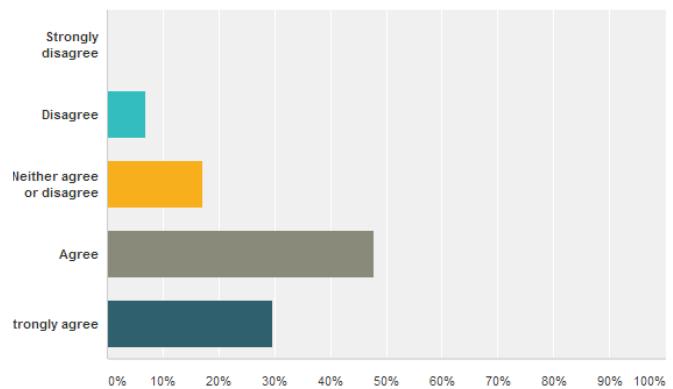


Figure 4.2(c) – Survey

In 2009, at Glastonbury alone 54 tonnes of cans and plastic bottles, 9.12 tonnes of glass 11.2 tonnes of discarded tents and 193 tonnes of compostable material including food and paper cups were left behind. With this statement in mind I am likely to clean up my campsite at the end of a festival.



The results for figure 4.2(b) have been compared to the results for figure 4.2(c) and, after analysing the individual responses, 27.1% of participants would change their behaviour to reduce their negative impact on the environment after being informed of the statistics in figure 4.2(c).

Figure 4.2(d) – Survey Analysis 3

Receiving cash incentives for cleaning up and returning bags of rubbish at a festival is likely to make me clean up the campsite

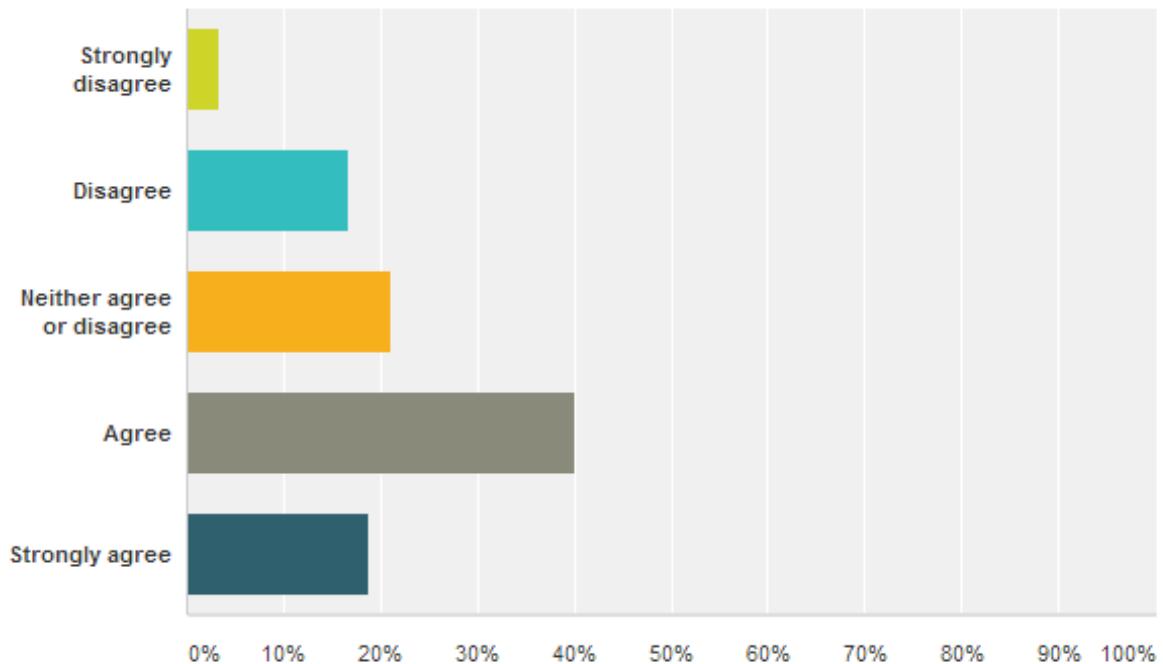


Figure 4.2(d) shows that 62.5% of UK music festival goers feel that cash incentives for cleaning up their campsite at a music festival would be effective.

Figure 4.2(e) – Survey Analysis 4

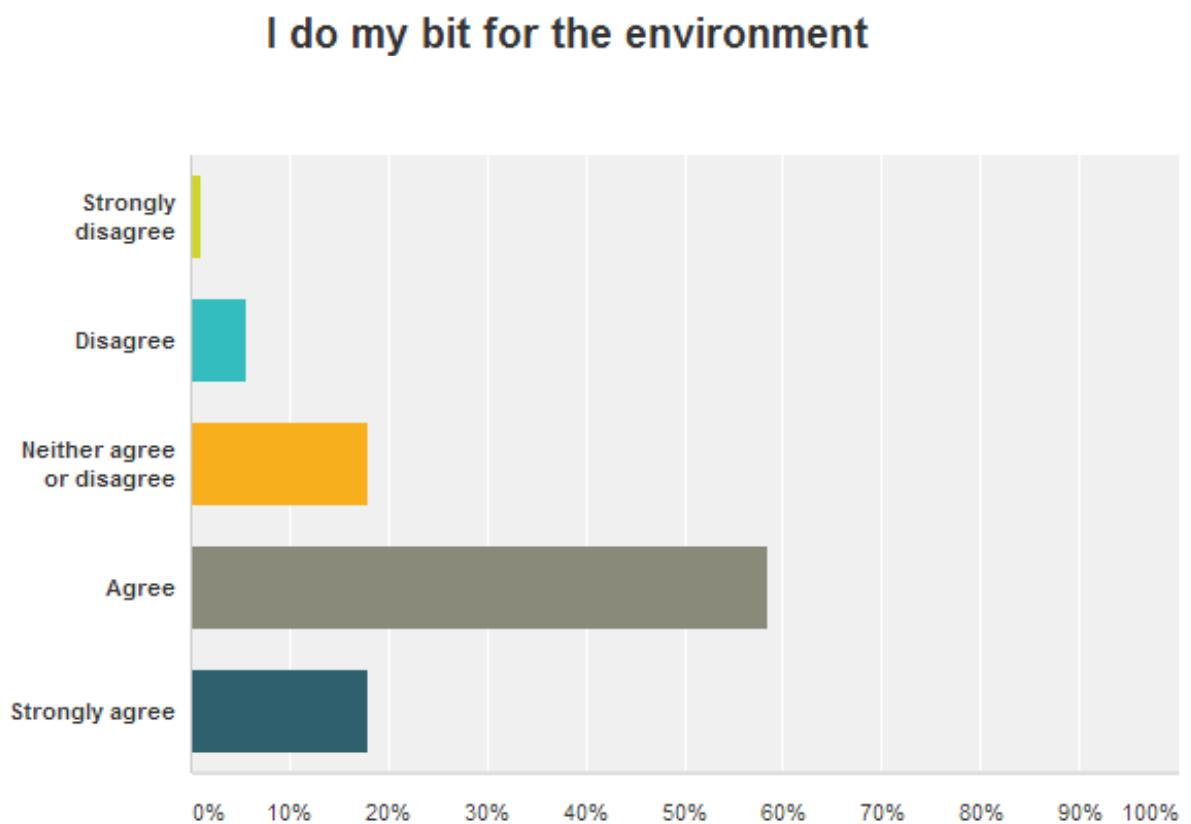


Figure 4.2(e) shows that of the 96 participants in the survey who attend music festivals 72.9% of them feel that they are already doing their bit for the environment.

Figure 4.2(f) – Survey Analysis 5

I feel I would like to reduce my negative impact on the environment but I am unsure how to do this

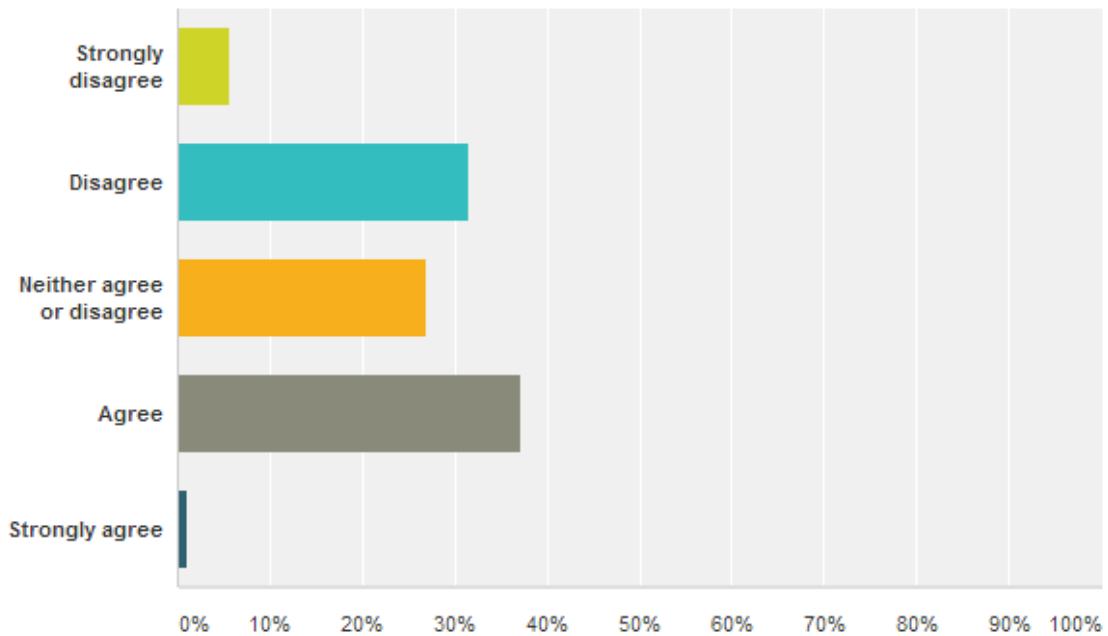


Figure 4.2(f) shows that 37.5% of the survey participants would like to do more for the environment but do not know how. When this was looked into further, using individual participants' responses, it was found that 28.6% of those participants who already feel they do their bit for the environment would like to do more but are unaware how.

Figure 4.2(g) – Survey Analysis 6

I am likely to take simple steps at home to reduce my negative impact on the environment after being informed of these at a festival

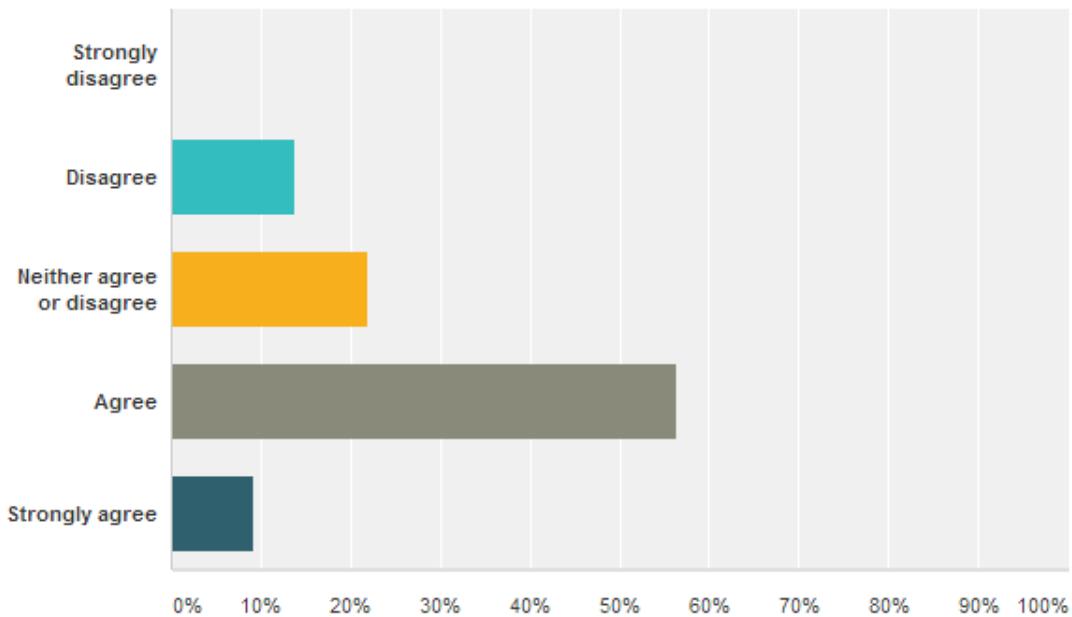


Figure 4.2(g) shows that 60.4% of the participants agree that they would change their behaviour in order to reduce their negative effect on the environment after be educated about ways to do it at a UK music festival.

Figure 4.2(h) – survey Analysis 7

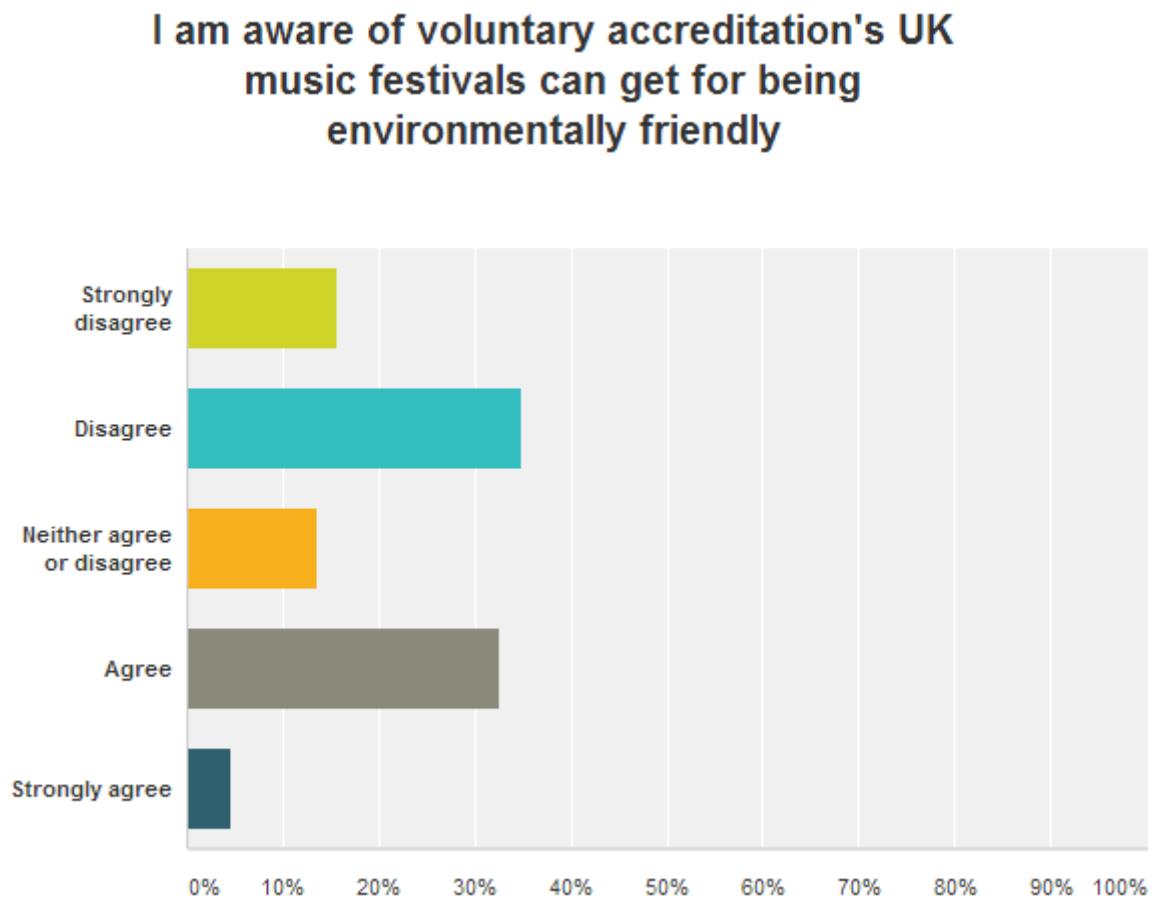
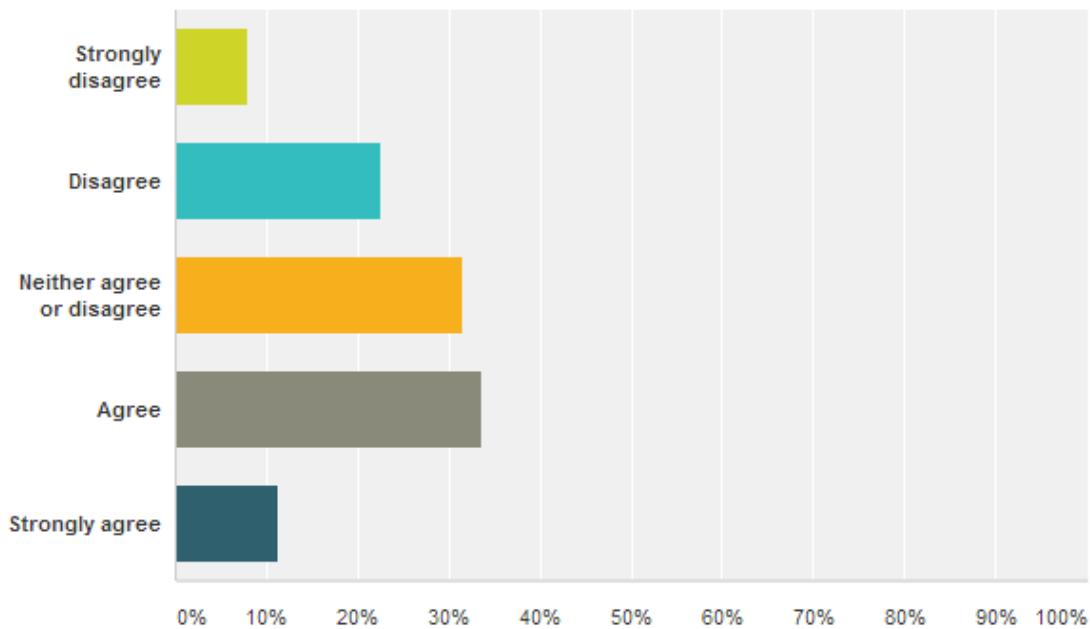


Figure 4.2(h) shows that 61.5% of the participants were unaware that festivals can participate in voluntary accreditation schemes for reducing their negative environmental impact on the environment.

Figure 4.2(i) – Survey Analysis 8

A UK music festival taking steps to reduce its negative impact on the environment or being carbon neutral would make me more likely to attend



These results in Figure 4.2(i) show that 40.6% of the participants agree that if a festival was seen to be taking steps to reduce its negative impact on the environment they would be more likely to attend. On the other hand 29.2% do not believe it would affect their decision to attend a festival.

Figure 4.2(j) – Survey Analysis 9

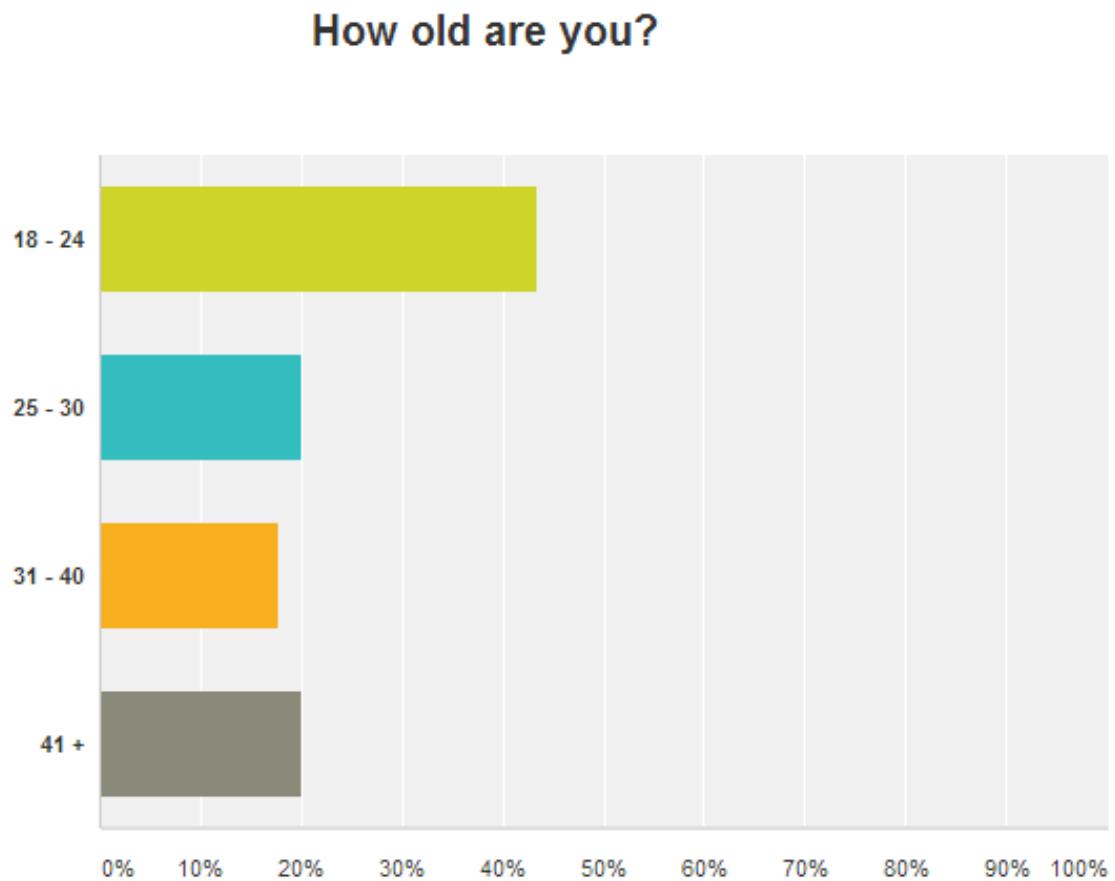


Figure 4.2(j) on its own does not tell the reader anything about environmental trends at UK music festivals. However, during analysis of the individual responses in the survey, it was found that age had little to no impact on the results or behaviour of UK music festival goers. So for this reason age is not a significant factor and will not be included in the other analyses.

Using the median age of each age group and the number of participants in each, the average age of the sample is approximately 31. This shows the survey is a good proportionate sample representation of festival goers' as a whole as the average age of a UK festival goer according to the Vital Festivals Annual Census, 2009 (cited by Watson et al. 2009) the average age of a UK festival goer is 28.

4.3 Data Analysis

This section of the project will concentrate on synthesising the data from the findings above with the information found in the literature review.

Figure 4.2(i) suggests that 40.6% of festival goers are more likely to attend a festival if it was seen to be taking steps to reduce its negative impact on the environment. Further evidence agrees with this suggesting that 60% of festival goers find the environmental effects of a festival either 'important' or 'very important' (figure 2.5) Because the percentage of festival goers share the same view, addressing the issues important to them is likely to have a positive impact on attendance and therefore a positive impact on the life-cycle of the festival year on year. The

suggestion of higher attendance is the incentive for festival organisers to accommodate this view

Figure 4.2(b) and 4.2(c) are a good example of how education could change behaviour. After being informed of the negative effects Glastonbury had on the environment in 2009, 27.1% of participants said they would change their behaviour positively to reduce this. Figure 4.2(f) also indicates education could be effective; 37.5% of participants, 28.6% of which already feel they do their bit for the environment, suggested they would like to reduce their negative effect on the environment but are unsure how to. This is also suggested in the literature review; Jackson (2006) states that a catalyst, such as education, is need to change behaviour.

Figure 4.2(g) shows 60.4% of participants agree they would change behaviour at home to reduce their negative impact on the environment after being educated about how to do so at a festival. Because this is a proportionately large amount of participants it would suggest that education could allow a festival to offset a proportionately large amount of its emissions through the concept of becoming carbon neutral, introduced in the literature review (The European Festival Association, 2014).

Literature from The Milken Institute Review (2008) suggests nudges as an effective method for behaviour change. Glastonbury's "Green Traveller Initiative" (Glastonbury, 2014a) which was introduced in the literature review, is a good example of this; there was a 5% drop in festival goers travelling by car between 2011 and 2012, after the initiatives introduction in 2011 which nudged festival goers to use public transport. Results from the survey also suggest the use of nudges would be effective in their changing behaviour. Figure 4.2(d) indicates 62.5% of participants are likely to clean up their campsite and return bags of rubbish for cash incentives.

The suggestion of higher attendance if a festival is seen to be environmentally friendly makes it logical for festivals to participate in voluntary accreditation. Although research suggests 61.5% figure 4.2(h) are unaware of voluntary accreditations. 39.2% of participants who currently believe they are doing their bit for the environment are aware of the voluntary accreditations, indicating that education will allow more people to appreciate what the accreditations represent.

Currently, festivals participating in voluntary accreditation are not likely to increase attendance hugely. However, with schemes such as 'love your tent' & 'love the farm, leave no trace' attempting to make it socially unacceptable to be environmentally unfriendly, festivals getting involved in these schemes now & gaining a reputation for being friendly to the environment, are likely to reap the benefits in the long run; not only in the environmental sense but also in terms of continuing to attract an increasingly environmentally aware audience.

Although findings from the literature review show that only 30% of event managers rated sustainability of the environment significant to their event this statistic was from 2009. Now, in 2014, when, for example, sending rubbish to landfill is more expensive than recycling it is expected this statistic may have increased as it now makes business sense as well as environmental sense to reduce the negative impact on the environment but it is also what festival goers want to see. Figure 4.2(i) shows this; 40.6% of participants said they were more likely to attend a festival if it was seen to be taking steps to reduce its negative effect on the environment.

4.4 Conclusion

The research suggests that there are cost benefits which come from festivals reducing their negative impacts on the environment. This, combined with growing interest surrounding the issue from festival goers, so much so that, the research suggests, attendance could be positively affected by festivals becoming more environmentally friendly. Because of this, it no longer just

makes business sense for festivals to reduce their negative effect on the environment, but now makes business sense as well.

However, the most effective way festival organisers can reduce the festival's negative impact on the environment is through changing the behaviour of festival goers both during the festival and also after leaving. This represents a reliance; the festival organiser's rely on the goers' to reduce their environmental impact of the festival and the festival goers' rely on the festival organiser's to tell them how to do this which in turn could increase attendance and please the majority of festival goers'

The study suggests that nudges and education could both be effective tools in changing festival goers' behaviour to a more environmentally friendly manner. This could reduce the negative effects a festival has on the environment and therefore possibly increasing attendance.

Suggestions given in the literature review suggest a few ways that could be effective in doing this.

4.5 Recommendations

The first recommendation is:

The festival organiser should ensure that the festival makes every effort to minimise those environmental impacts over which it has control but not to expect to make the festival, on its own, carbon neutral.

This can be done by reviewing every aspect of the festival's operations to ensure the most environmentally friendly options are being utilised, for example, composting toilets, solar power, and use of biofuel. This needs to be holistic to ensure the maximum benefits overall are obtained.

This will include the use of nudges towards festival goers and educating both them and traders to understand the impact in order to change behaviour.

The second recommendation is:

The festival organiser should develop mechanisms to educate festival goers so they improve their environmental impact outside the festival in daily life. This way the festival can offset part of its negative environmental impact through improved environmental effects throughout the year.

This recommendation is made because, the research conducted indicates a UK music festival is unable to eliminate all the negative effects it has on the environment, no matter how efficient operations, within its own environs. Therefore improving the environmental impact of festival goers' behaviour, in daily life, throughout the rest of the year will offset environmental impact as a whole.

The third recommendation is:

Festival organisers should seek voluntary accreditations. This benefits the organisers in several ways. They will have an independent assessment of their environmental impact and a basis on which to judge improvements. Festival goers will have a source of information on which to make judgements about which festivals to attend where the environmental impact is important to them. This will encourage the longer term sustainability of a festival as it will be an attractive option to a significant number of festival goers therefore keeping attendance high.

This mechanism perhaps provides a virtuous cycle where festival goers can encourage festivals to improve their controllable environmental impact and festival organisers can encourage festival goers to improve generally, which in turn creates a higher expectation for festivals.

5.1 Appendices

Appendix 1 – Survey questions

Q 1

How old are you?

- 18 – 24
- 25 – 30
- 31 – 40
- 41+

Q 2

On average, how many UK music festivals do you attend a year?

- 0 – never been to a UK music festival
- 1-3
- 4-6
- 7-10
- 11+

Q 3

I do my bit for the environment

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

Q 4

I take steps to reduce my negative impact on the environment at a music festival such as taking my tent with me when I leave, cleaning up my litter and using public transport to travel to a from a festival.

- Strongly disagree

- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

Q 5

Receiving cash incentives for cleaning up and returning bags of rubbish at a festival is likely to make me clean up the campsite.

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

Q 6

In 2009, at Glastonbury alone 54 tonnes of cans and plastic bottles, 9.12 tonnes of glass 11.2 tonnes of discarded tents and 193 tonnes of compostable material including food and paper cups were left behind. With this statement in mind I am likely to clean up my campsite at the end of a festival.

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

Q 7

I feel I would like to reduce my negative impact on the environment but I am unsure how to do this.

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

Q 8

I am likely to take simple steps at home to reduce my negative impact on the environment after being informed of these at a festival.

- Strongly disagree

- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

Q 9

I am aware of voluntary accreditation's UK music festivals can get for being environmentally friendly.

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

Q 10

A UK music festival taking steps to reduce its negative impact on the environment or being carbon neutral would make me more likely to attend.

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

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