

An Assessment of Environmental Management within the Event Industry and Formulation of a Generic Framework Environmental Management System for Large Events

by

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ABSTRACT

The potential impacts from large events are significant as a sudden influx of between five thousand and several hundred thousand people descend onto a green field site. In addition, the events industry has seen rapid growth over the past three decades as the potential economic, social and regeneration benefits have become widely recognised.

The local authority has an existing role as a regulator, guardian, facilitator and educator within the community. These roles have been further emphasised following national pressure to practice and popularise sustainable development following the formulation of a central agreement on sustainable development between nations called Agenda 21, over two thirds of which cannot be delivered without the commitment and co-operation of local government.

Research for this dissertation sought to discover the current relationship between the local authority and the event organiser and identify opportunities for strengthening the partnership to achieve better environmental performance. In addition, the event industry was researched in order to assess current environmental performance, identify opportunities, and develop a generic framework environmental management system for large events. Methods of data collection included a comprehensive literature review, a postal questionnaire to local authorities and a small survey of current practice within the events industry.

The primary conclusions from this dissertation are that there are significant opportunities not being utilised for local authorities to develop partnerships with event organisers to establish and improve environmental management using their role as a guardian, a facilitator and an educator. The potential for incorporating environmental management into the existing event management cycle is also considerable, as proved by isolated examples such as the Sydney Olympic Games in 2000. The final output of this project is a generic framework environmental management system for large events to provide event managers with a strategic guide to approaching and managing their environmental responsibilities. This study has opened up a number of further questions and opportunities due, primarily, to the enormous scale of the events industry and its rapid advance.

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1.1 Introduction

This research project is based on the application of Environmental Management Systems (hereafter EMS) to large events in order to minimise any potential negative impact that they may have upon the environment. Large events may cause significant environmental impact due, primarily, to their size. The event industry has seen huge growth over the last three decades with numbers of entrants to festivals, concerts and sports events frequently exceeding fifty thousand. The event management sector is beginning to recognise the importance of considering environmental issues (especially within large sport events) as the realisation that there may be far higher costs, socially and economically, if the environment is ignored.

Environmental aspects are traditionally well established in Local Authorities (hereafter LAs) through public policies in functions such as environmental health, land-use planning, transport and conservation. The increasing recognition of the importance of the role LAs play in environmental protection, and consequent public and political pressure has led many authorities to take steps to extend their role into environmental management. The government's commitment to sustainability is dependent on the actions of local government which requires LAs to act as an educator and a facilitator to business in their locality.

This study has focussed on obtaining and assessing information from event managers and LAs in order to develop a generic framework EMS, with the aid of relevant literature, which may be used by event organisers.

1.2 Outline of the report

This chapter summarises the contents of subsequent chapters to provide an overview of the project. The aims and objectives are stated and an overview of the project design is provided summarising the approaches taken to ensure that the overall aims are met.

Chapter two discusses the literature reviewed to provide an essential background to the project. It discusses, using published literature and case studies, the features of EMSs, the role of the LA, and the role of an event manager.

Chapter three explains the methodology employed in order to obtain information on the role and attitude of local authority and event managers and to produce an EMS for event management.

Chapter four presents and discusses the results of the questionnaires and interviews and any further information gathered as a result of direct contact with LAs and event managers. It also presents the generic framework EMS

Chapter five presents the findings of the project and relates them to the aims and objectives. Shortfalls of this project are discussed and opportunities for further research are highlighted.

1.3 Aims and objective of the project

The objective of this project is to assess the event management sector and environmental management within local government to produce a generic framework EMS for application to large events. The framework EMS will provide the user with a clear guide to best practice management of environmental impacts at large events.

The following aims have been identified to ensure achievement of the overall objective:

- Identify through the means of a postal questionnaire the role of LAs with regard to large events, and how they may advise and assist with the environmental impacts of large events.
- Understand the issues involved in event management and the degree to which the environment is considered through extensive research and communication with event organisers.

- Design a flexible, transparent and effective generic framework EMS for large events that may be used by anyone associated with large events as a reference for best practice.

1.4 Project design

The study was designed with the fulfilment of the aims and objective as the primary responsibility. Furthermore, it was designed with enough flexibility to enable it to focus on areas of interest as it matured (e.g. as more information was gathered the project was taken in slightly different directions in order to achieve the desired output).

The best practice generic framework EMS has been formulated as a result of a comprehensive review of current literature, a questionnaire to LAs and contact with event managers. This information was collated and analysed in order to produce a framework that may be used in real life large event management. Despite being a best practice guide, the EMS was designed with practicality in mind in order to maximise its potential to be actively applied.

1.5 Project justification

Since the late 1960's the importance of managing the impact of human activity on the natural environment has gained increasing levels of support, highlighted in the rising quantities of legislation, both nationally and internationally (Gibbs and Longhurst, 2000). Furthermore, improvements in environmental performance have been demanded by rising customer expectations and supply chain pressure (O'Callaghan, 1996). The recognition that there are limits to the stresses that may be exerted on natural systems has given rise to the concept of sustainable development, discussed further in chapter 2. In order to adhere to the objectives of sustainable development, and to act on environmental concerns, organisations have implemented EMSs.

Large events have the potential to impact the environment as a result of increased waste production, traffic overload, increased energy consumption and the direct impacts associated with large numbers of people visiting a site such as soil

compaction and stress on flora and fauna. For example, the Royal Cornwall Show attracted over one hundred and ten thousand visitors and in excess of twenty thousand vehicles over the course of a summer weekend in 2002 (Royal Cornwall Show facts and figures, www.royalcornwall.co.uk, accessed 15/02/03). The site covers over 8km² and is used for a variety of large events annually. The impacts upon this area may be very significant as the site drains into the River Camel and it is located near Wadebridge, an area of rural North Cornwall renowned for its natural beauty and biodiversity (Graham, 1994). For the purpose of this project a large event is an event that attracts over five thousand visitors per day during its staging.

Large events may take on a variety of forms such as sports events (international, national and local), concerts and festivals (music, cultural and arts) and business functions and exhibitions that all have the potential to cause significant harm if not managed in a comprehensive, systematic manner. Follwell and Zingales (2001, p.4) report that the findings from the European Roundtable on Cleaner Productions workshop on 'Sustainability and Large Scale Sports Events' in 2001 concluded that:

- *The environment is emerging as a key issue in the large-scale event industry. However, the industry is struggling with how best to deal with environmental issues.*
- *The event industry represents new frontier for sustainable development, but this must be consolidated. In particular it presents a special opportunity to take the sustainability debate to new audiences.*
- *Legacy – the knowledge gained from Sydney (Olympic Games), together with other sport-environment initiatives, needs to be collated and transferred into a standard toolkit for major events.*

The Sydney Olympics were an example of how successful environmental management can be when applied to an event, although it is recognised that it is at the largest end of the event scale. However, it is recognised that a number of environmental initiatives have developed and been applied as a result of the Sydney success story, including the British Open in 2001 and the Commonwealth games in Manchester in 2002 (UK Sport, 2003).

Bowdin *et al.* (2001) note that the involvement of LAs with events has seen a large increase since the 1970's as they recognised the role of events in regeneration and tourism. Allen and Shaw (2001) found that, of the 137 festivals responding to their study, over three quarters received part of their funding in 1998/9 from LAs. This is not surprising as the benefits of staging an event may far outweigh the costs. New Leisure Markets (1995, p.4) identifies arts festivals as being attractive to LAs because they provide:

- *Visitors, tourists, and spending.*
- *Commercial sponsorship for visual arts, thereby taking the strain of arts authorities.*
- *Cultural experiences for local residents.*

Similar trends are reflected throughout the events industry with the positive economic, and often social, benefits being too large to ignore. LAs have come under increasing pressure to manage their own environmental issues, deriving from a sense of social responsibility and the need to demonstrate their commitment to a sustainable future (Netherwood and Shayler, 1996). The process is there for implementing sustainable development into the community and requires that the LA take responsibility for environmental, social and economic issues as a way of improving people's quality of life. Event managers have the task of identifying and predicting the impacts from the event and managing them. However, LAs should have some scope for, at the very least, offering advice and assistance to large event managers in order to ensure that they meet their own objectives (sustainable development) and that they promote environmental awareness to the business community.

The topics and issues discussed above display a brief snapshot of the problems and opportunities that are present within the event management sector. There are examples of best practice (discussed in chapter 2) such as the Glastonbury festival and the Olympic Games, but they are part of a minority in a market that continues to expand exponentially. The justification for this project lies within the fact that there is little consideration of the environment in event management currently, and that there

is a considerable opportunity to develop and implement environmental management systems into the existing event management structure. Furthermore, LAs have a key role to play in order to meet their objectives (discussed in chapter 2) and to ensure that the wants and needs of their community come first.

1.6 Summary

Events are increasing in frequency, as are the average visitor numbers to them. Large events have the potential to cause short and long term impacts that may be both positive and negative. It is the role of the event manager to assess and balance these impacts.

Events are an excellent opportunity to showcase the physical characteristics of an area, but event environments may be delicate, and care should be taken to safeguard and protect them. The importance of considering the environment when staging an event is gaining support, as reflected by the environmental guidelines for sports events, produced by UK Sport (2003). Environmental management systems are a recognised framework for comprehensively managing environmental impacts.

This study will bring together all of the above to produce a generic framework environmental management system that may be applied to large events. Furthermore, it will also illustrate the role that should be played by the Local Authority in order to ensure that they meet their commitment to sustainable development.

This chapter presents the information researched and discusses how it fits into the overall project. Sustainable development is discussed initially to provide the historical backdrop for environmental consideration within LAs and the wider community. Next EMSs are defined and a best practice EMS model is presented. Then the relationship between the LA and environmental management is discussed including predicted future trends and the relationship between the LA and the event. Finally the event industry is introduced and discussed including current practice and best practice environmental initiatives.

2.1 The journey towards Sustainable Development: Local Agenda 21

The foremost issue that will dominate the twenty-first century, identified by The Millennium Project, was that of achieving sustainable development (Glen and Gordon, 1998).

The concept of sustainable development was born during the 1980's following the United Nations Conference on the Human Environment in Stockholm (1972) which highlighted environmental degradation as a global issue as a result of mass production and consumption (UNCED, 1992). Positive results at the time were, however, not forthcoming following difficulties in agreeing a course of action as nations opted for continued economic development against the perceived cost of environmental action.

In the 1980's the environmental debate gained momentum as methods such as the precautionary principle were being developed and implemented against a rising tide of litigation against organisations responsible for environmental degradation (Glasson *et al*, 1999). The term 'sustainable development' was popularised as the debate over whether economic growth was essentially good or bad continued. The World Commission on Environment and Development produced a report called 'Our Common Future' (WCED, 1987, p.45), where they defined sustainable development as:

"...development which meets the needs of the present without compromising the ability of future generations to meet their own needs."

Despite the abundance of subsequent definitions aimed at clarifying the concept, it is generally accepted to include basic principles of environmental protection, quality of life, social equity and futurity (Dunphy and Benvensite, 2000). Its success relies on the recognition that our economy, environment and social well-being are interdependent and in order for it to work it needs governments, businesses, organisations and individuals to all play their part.

In practice there have many problems formulating a generic model for sustainable development as each nation, or often region, has different context, needs, conditions and opportunities (Mitchell, 2000). However, a product of the Earth Summit in Rio de Janeiro in 1992 was the formulation of a central agreement called Agenda 21, inspired and guided by the findings from the World Commission on Environment and Development report (1987). Agenda 21 is an internationally agreed blueprint containing hundreds of objectives for moving the global society towards sustainable development. It calls on national governments to prepare their own strategies for sustainable development. The role of the LA is crucial to Agenda 21 as it is the level of government closest to the citizen. It is estimated that over two thirds of it cannot be delivered without the commitment and co-operation of local government (Riglar, 1997).

In recognition of the importance of the role that local government has in achieving sustainability, Local Agenda 21 (hereafter LA21) – a local strategy for sustainable development – was also adopted at the Earth Summit. The key themes in LA21 are consensus building, empowerment and the development of robust environmental strategies (Barton and Bruder, 1995). The emphasis is on the process by which these themes are addressed rather than on the formal outputs. Despite being a voluntary scheme, the Local Government Management Board (LGMB) noted that by 1997 over 70% of LAs in the United Kingdom had committed to LA21 (LGMB, 1997).

CHARACTERISTICS OF A SUSTAINABLE SOCIETY: A CHECKLIST FOR LOCAL AUTHORITIES

A sustainable society seeks to:

1. Protect and enhance the environment

- Use energy, water and other natural resources efficiently and with care.
- Minimise waste through re-use, recovery and recycling programmes.
- Limit pollution to levels which do not damage natural systems.
- Value and protect the diversity of nature.

2. Meet social needs

- Create or enhance places, spaces and buildings that work well, wear well and look well.
- Making settlements 'human' in form.
- Value and protect diversity and local distinctiveness and strengthen local community and cultural identity.
- Protect human health and amenity through safe, clean and pleasant environments.
- Emphasise health service prevention as well as care.
- Ensure access to good food, water, housing and fuel at reasonable cost.
- Meet local needs with local services wherever possible.
- Maximise everyone's access to the skills and knowledge needed to play a full part in society.
- Empower all sections of the community.

3. Promote economic success

- Create a vibrant local economy that gives access to satisfying and rewarding work without damaging the local, national or global environment.
- Value unpaid work.
- Encourage necessary access to facilities, services and goods whilst trying to reduce use of personal vehicles and other potential impacts.
- Make opportunities for culture, leisure and recreation readily available to all.

Table 2.1 Characteristics of a sustainable society: A checklist for Local Authorities
(Source: Adapted from DETR, LGMB and LGA, 1997).

Table 2.1 illustrates the approach advised by the Department of Environment, Transport and Regions, the Local Government Association, and the Local Government Management Board (DETR, LGA and LGMB, 1997). It highlights the magnitude of issues that make up a sustainable society and places them into the categories of environment, social and economic needs. For LAs to achieve their LA21

objectives they must recognise that it involves a complete shift in attitude, not simply managing their environmental impacts.

2.2 Environmental Management Systems (EMS)

EMSs were first developed in the United States in response to increasingly stringent environmental legislation and costly penalties for non-compliance. This led to the realisation that there was a need for an integrated and proactive approach to environmental issues. Internal management systems were already well established in areas such as health and safety so they were recognised as a favourable approach to achieving improved environmental performance. The extent to which a formal EMS is practised varies greatly depending on a range of resources being available, such as time and finances. However, Sheldon and Yoxon (1999, p.4) state that:

“...There is no mystery about management systems. Even a sole trader will have some form of management system: it may not be formal, or based on standardised formatted paperwork, but it will be a management system nonetheless”.

Therefore, despite their being some stigma attached to management systems, they are often practiced without the formality presumed essential. However, in order for a management system to fully integrate itself into the culture and function of an organisation it will need some degree of structure. This will help ensure that it is comprehensive and progressive. For the purpose of this dissertation an EMS is defined as:

“...the organisational structure, responsibilities, practices, procedures, processes and resources for determining and implementing environmental policy.” (BSI, 1994, p.6)

Adopting such systems has led to, *inter alia*, cost savings, improved credibility and substantial competitive benefits (Rondinelli and Vastag, 2000). Furthermore, gaining accreditation to a standard, such as the International Organisation for Standardisation’s ISO14001 standard or the European Unions Eco-Management and Audit Scheme (EMAS) regulation may reduce policing by regulatory authorities and increase efficiency. However, the most significant advantage to an organisation that

commits to an EMS will be increased internal efficiency in areas such as energy and waste, which often also result in cost savings.

2.2.1 Certifying the EMS: the Eco-Management and Audit Scheme

Companies that are certified to a standard may win partial respite from government policing of their operations, as well as protecting the environment and saving money through increased efficiency of resources (Buchholz, 1993). In 1993 a voluntary scheme was introduced to Europe called the Eco-Management and Audit Scheme (EMAS). EMAS was established to improve the quality of environmental management throughout European industry, to help European companies gain a competitive advantage from their improvements and to communicate their progress to the general public (Barrow, 1999).

The full requirements for joining the EMAS are described in the EC Regulation 1836/93/EEC. The fundamental principles of EMAS require industry to manage their environmental impacts by:

- Adopting a pro-active approach to environmental management.
- Prevention and reductions in pollution at source.
- Ensure sound management of resources.
- Use clean, or cleaner, technologies.

In order to participate in EMAS the organisation will have to implement and maintain each of the seven components shown in the table in Appendix A. The whole system must be validated by an independent external accredited verifier and if successful the organisation will be included in the eco-audit register of companies and be entitled to use the EMAS logo.

2.2.2 Best practice EMS

An EMS is not about environmental scientists as it is often perceived. Instead it is about putting systems in place to identify, measure, and monitor impacts in order to reduce, remedy or prevent them altogether. Netherwood (1996) states that a

successful and effective EMS will incorporate commitment to continuous improvement and, through defining clear objectives and targets, will bring about tangible environmental improvements.

In order for an organisation to improve its environmental performance it does not need to implement an EMS. However, with the structure of a system based approach an organisation can consistently meet its targets, improve performance, and incorporate environmental considerations into all aspects of the business. Netherwood (1996, p.49) describes the ideal EMS function as follows:

“A fully integrated management system that covers the totality of operations, helps management and workers see their place in the organisation and recognise the interdependence of all aspects within it. With clear communication and information it should provide a clear and understandable organisational map of the responsibilities and reporting arrangements within the company”.

A best practice approach to an EMS should incorporate a cyclical arrangement of plan, do, check, review (illustrated in figure 2.1).

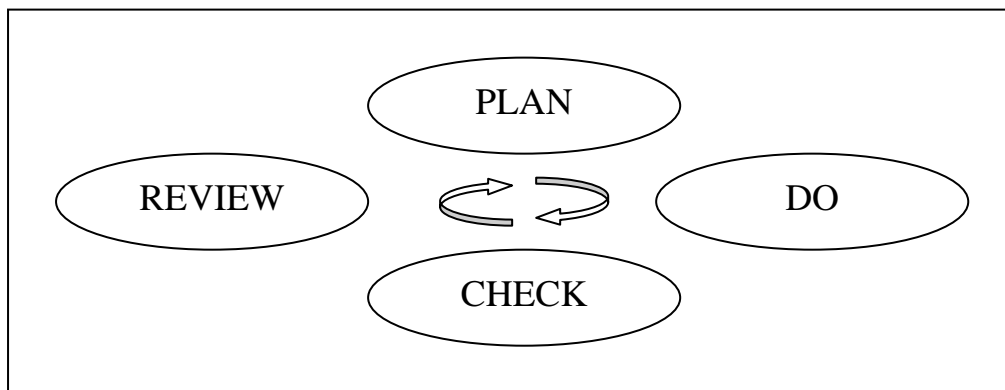


Figure 2.1 Cyclical approach to EMS implementation

Essential factors for the implementation of an EMS are that it is comprehensive, understandable and transparent. To enable an EMS to continuously conform, develop and improve then all responsibilities must be communicated and understood. External credibility and continued commitment rely on transparency of the EMS. A best practice model for EMS development and implementation is illustrated in figure 2.2.

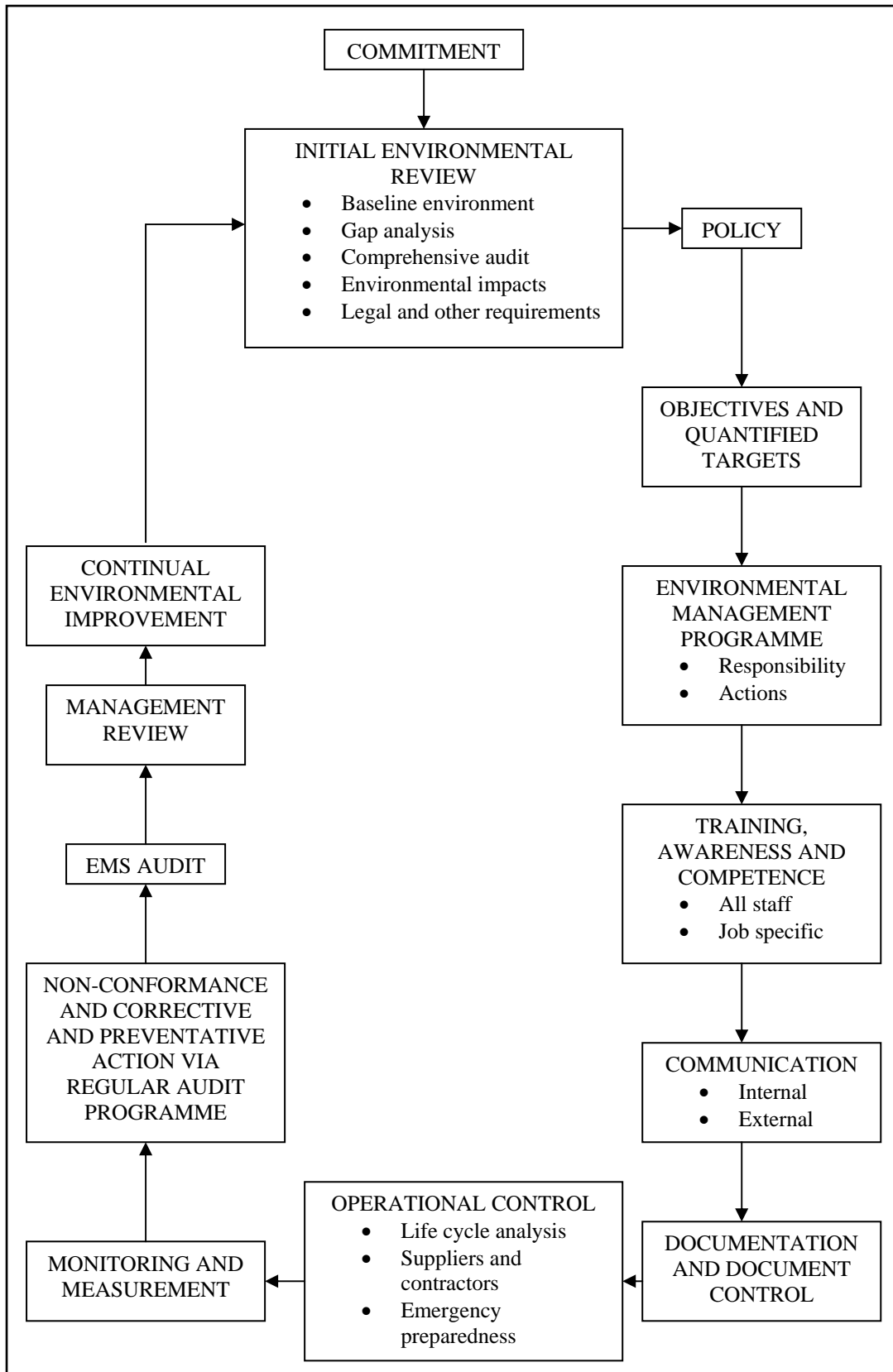


Figure 2.2 Best practice EMS model

Designing and implementing an EMS acts as a catalyst for necessary environmental changes with regard to business practice, actions and behaviours (Rondinelli and Vastag, 2000). Adopting an EMS requires a shift in corporate culture away from a command and control paradigm towards one that is as sensitive to the environment as it is to other parts of the business.

In order for an EMS to be installed and maintained it needs **commitment** at the most senior level as well as from those implementing it. Motivation to do what is right is a good motivation to install a sense of commitment within an organisation. This may be achieved by involving personnel in the decision making process, giving incentives or by establishing environmental forums.

The **initial environmental review** is an essential part of the EMS, despite not being required by ISO14001, because it provides the baseline data from which issues and their severity can be determined. It is important that environmental aspects are prioritised according to significance as this allows an organisation to focus resources on the most important issues. The unexpected or the unknown are often uncovered during the process as it is unusual for it to have been performed previously. It is important that it is done comprehensively and systematically because the EMS will be built around the information obtained.

The **environmental policy** should set out the overall direction and principles of the organisation, such as pollution prevention and continuous improvement. It should be based on information from the initial environmental review and be documented and publicly available. A fundamental aim of the environmental policy formulation is to create an environmental culture within an organisation. It must address the significant aspects and processes of the organisation and create a framework for managing them.

The planning stage involves the setting of **targets and objectives**. In order to set the objectives the method of achievement needs to be considered and there needs to be adequate data on: the significant impacts; the legal requirements; the technical options; and the views of all stakeholders. The objectives and targets should be in line with the environmental policy and the significant impacts identified in the IER and

they should be Specific, Measurable, Achievable, Realistic and Time-bound (SMART). The objectives should illustrate the commitment to improved environmental performance. The targets should quantify the objectives in more specific terms and set responsibility where appropriate.

The **environmental programme** is the management tool used for reviewing progress against the targets. It should be fully integrated into the business planning process and should show clearly where resources and responsibilities lie. It is essential that responsibility for tasks is planted into the heart of the organisation and that top level management provides the resources required. Sheldon and Yoxon (1999, p.103) describe this stage as:

“...the link between thought and action... achieved by establishing a systematic implementation programme designed to provide a dynamic and adequately resourced plan of campaign”.

Training awareness and competence refers to all personnel (including contractors and subcontractors) being aware of the requirements of the EMS and able to fulfil their role effectively. It is important that employee performance includes their ability to undertake their tasks as required by the EMS. It is important that training is effective, regular, includes associated parties and that records of training are kept.

Communication is a key process in order to successfully implement and maintain the EMS. Internal systems should ensure effective delivery of information regarding the EMS and a two-way exchange of news and views. External communication of information is important to transfer news to stakeholders.

Core elements of the EMS should be **documented** clearly and concisely and kept up to date. It may be preferable to do this in an electronic format where it is available internally at the touch of a button. Document control must be legible, dated and identifiable.

The **operational control** should: stipulate operating criteria; be related to identifiable significant aspects; be maintained; and be communicated to supplier and contractors.

It should also establish emergency plans identifying potential accident and emergency situations. These plans should be tested (after exercise and real response) and then reviewed and communicated.

Key characteristics of the business that were identified as having significant impacts during the initial environmental review must be **monitored and measured** in order to track performance against the objectives and targets and to ensure the reliability of the data. Compliance with regulatory and other requirements should also be evaluated.

It should be clear who is responsible for **non-conformance** and they must take action to mitigate impacts (root-cause analysis). Changes occurring from the non-conformance review should be implemented and recorded and then reviewed again.

Independent **audits of the EMS** should be completed regularly that check compliance and ensure implementation. EMS audits may be performed by internal staff but the person(s) responsible should be sufficiently removed from the system.

Regular **management reviews** are an essential part of the EMS. They must establish how and what is under review. Results then lead into the **continual environmental improvement** stage that subsequently feeds back into all stages of the EMS.

2.3 The role of Local Authority in environmental management

The saying ‘think global, act local’, is perhaps the best way of illustrating the role of local government in achieving worldwide sustainable development objectives. The Association of County Councils (1990) provides a summary of the environmental functions of local government, and places them into 5 main categories:

1. Prevention – i.e. development control, land use and emergency planning.
2. Regulation and control – i.e. waste disposal and pollution control.
3. Restoration, conservation and enhancement – i.e. in terms of transport facilities and nature conservation.
4. Monitoring and coordination.

5. Organisational – maximising the environmental performance both within authority and through services provided.

The Audit Commission (1997) state that LAs will play a key role in preparing public opinion for the lifestyle changes that will be necessary to achieve environmental improvement in the future. Therefore, the LA provides the critical link between global legislation and policy, and its grassroots implementation. As a service provider LAs have a responsibility to provide for the welfare of the community. In environmental terms this includes the removal of substances such as waste and the prevention of activities which harm the environment (Netherwood and Shayler, 1996).

LA management of the environment is not a new phenomenon and is the third largest area of spending after social services and education (Riglar, 1997). Table 2.2 shows five roles that the LA fulfils with regard to environmental management. When considering large events the role of the LA will be to facilitate the organiser by providing advice and assistance and using its experience to educate.

As a service provider the LA can prevent environmental damage before it occurs with appropriate planning. LAs capability to make a practical impact on the environment is particularly important in four areas; waste management, energy conservation, planning and transport, and pollution control (Audit Commission, 1997).

LAs can also have a significant environmental influence by working in partnership with other organisations (e.g. encouraging contractors to adopt sound environmental practice) and promoting environmental awareness (e.g. leaflets to local residents and businesses). Their role as a facilitator can enable liaison between regulatory bodies, pressure groups and businesses to encourage effective environmental management.

LAs have adopted EMSs to assess their own impacts on the environment and to manage them, despite being under no statutory duty to do so. Formal EMSs provide the structured approach necessary to ensure that all the statutory and non-statutory environmental aspects associated with a LA are managed in a co-ordinated and systematic way (DoE and LGMB, 1995).

Role	Description
<i>Service Provider</i>	Prevention of damaging activities. Removal of harmful substances. Effective transport scheme.
<i>Guardian and Planner</i>	Development control. Urban and rural environment protector. Use of statutory powers to prevent environmental degradation.
<i>Facilitator</i>	Enable liaison between interest groups. Advise on issues.
<i>Landowner and Employer</i>	Direct impacts of their own activities in terms of waste, energy, transport and housing.
<i>Educator</i>	Influence over schools and businesses. Establishment of environmental centres. Educating staff on environmental issues.

Table 2.2 Five roles that the LA fulfils with regard to environmental management (Source: Adapted from Netherwood and Shayler, 1996).

2.3.1 Eco-Management and Audit Scheme for Local Authorities

Traditionally, environmental issues within LAs had mainly been dealt with in an *ad hoc* manner. The adoption of LA21 pressed the need for a formal framework for dealing with environmental issues if LAs were to achieve the first key element of the LA21 strategy of putting their own house in order (LGMB, 1997). Despite being originally designed for industry, the UK pioneered the extension of EMAS into the Local Government sector. The Department of Environment (DoE) in collaboration with the Local Government Management Board (LGMB) and the Scottish Office set up a pilot project in 1992 to see how EMAS might be adapted for use by LAs. They produced a modified EMAS called LA-EMAS which came into operation in April

1995 alongside the industrial sector EMAS. LA-EMAS allows operational units to be registered, rather than sites and is intended to be adaptable.

The new EMAS 2, described in the Regulation 761/2001/EEC, has replaced the old scheme and LA-EMAS because it is not site specific and can be applied to whole organisations such as LAs. It involves a five year review, rather than the previous three year review and includes ISO14001 as the requirement to fulfil the EMS role. It is expected that uptake of the EMAS 2 will increase as a result of the changes made (Mitchell, 2002).

2.3.2 Future role of EMSs in Local Government

The uptake of EMSs in LAs has been differential due to a number of reasons. Firstly, the re-organisation of LAs meant that many LAs have been unwilling or unable to allocate resources (Netherwood and Shayler, 1996). Furthermore, some LAs have been in the development stage of an EMS for a number of years due to these constraints. Common factors inhibiting the development of a successful EMS within a LA will be exaggerated due to their size, vertical management structures, varying functions and fragmented financial management arrangements (Netherwood and Shalyler, 1996). To date there are still just fifteen LAs registered to EMAS or LA-EMAS. One of the main problems with applying EMAS to LAs is the scale at which they operate and the departmentalism within them (Netherwood and Shayler, 1996).

2.3.3 The relationship between the Local Authority and events

The links between LAs and events has grown as the benefits from events such as regeneration and tourism have become recognised. The extent to which LAs include in their remit large events is not widely documented. For large events to take place they require a Public Entertainment License (hereafter PEL), granted by the LA. The LA has the power to grant a PEL with built in conditions that may reflect environmental concerns. However, in a conversation with Rob Vinestock (15/03/03), editor of the magazine *Event Organiser*, he stated that the advice on events and the granting of PELs will vary greatly with places that regularly play host to large events developing a degree of expertise on the matter. He also pointed out that:

“One of the main bugbears for organisers and their contractors over the years has been inconsistency between different licensing authorities on a variety of subjects. A few years ago the organiser of a series of music festivals around the country pointed out how one local authority had insisted on a certain number of metal rubbish bins being situated around the festival site. The next local authority declared the metal bins to be fire hazards and said they would withhold a PEL if they were used.”

This level of inconsistency damages the relationship between event organisers and LAs. For large scale events, the LA may organise a meeting to include the emergency services, environmental health, transport and the management team to discuss street closures, special access and parking arrangements (Bowdin *et al.*, 2001). Health and safety issues have been tackled in this way with events such as the Glastonbury Festival and large sports events in order to assess the risks with all possible experts. Traditionally, however, events receive little attention from an environmental standpoint highlighting the need for a formal procedure.

2.4 Event management

Each year hundreds of large events are staged throughout the UK. They dominate the media, the local and regional economy, the tourist industry, the community and create as a result, result in both positive and negative impacts. The impacts may be categorised into social and cultural, physical and environmental, political, and tourism and economic as illustrated in table 2.3.

There has been a large increase in events over the last three decades as the benefits have been noticed by local and national government and other public sector bodies. Events are increasingly being used to serve a host of policy objectives including: delivering tourists to local business; regenerating communities; celebrating special occasions; arousing civic pride; inspiring the arts; and stimulating regional economies (New Leisure Markets, 1995).

Sphere of Event	Positive Impacts	Negative Impacts
<i>Social and Cultural</i>	<ul style="list-style-type: none"> • Shared experience • Revitalising traditions • Building community pride • Validation of community groups • Increased community participation • Introducing new and challenging ideas • Expanding cultural perspectives 	<ul style="list-style-type: none"> • Community alienation • Manipulation of community • Negative community image • Bad behaviour • Substance abuse • Social dislocation • Loss of amenity
<i>Physical and Environmental</i>	<ul style="list-style-type: none"> • Showcasing the environment • Providing models for best practice • Increasing environmental awareness • Infrastructure legacy • Improved transport and communications • Urban transformation and renewal 	<ul style="list-style-type: none"> • Environmental damage (short and long term) • Pollution • Destruction of heritage • Noise disturbance • Traffic congestion
<i>Political</i>	<ul style="list-style-type: none"> • International prestige • Improved profile • Promotion of investment • Social cohesion • Development of administrative skills 	<ul style="list-style-type: none"> • Risk of event failure • Misallocation of funds • Lack of accountability • Propagandizing • Loss of community ownership and control • Legitimizing ideology
<i>Tourism and Economic</i>	<ul style="list-style-type: none"> • Destination promotion and increased tourist visits • Extended length of stay • Higher yield • Increased tax revenue • Job creation 	<ul style="list-style-type: none"> • Community resistance to tourism • Loss of authenticity • Damage to reputation • Exploitation • Inflated prices • Opportunity costs

Table 2.3 The impacts of events (Source: Adapted from Bowdin *et al.* 2001).

The importance of sound environmental management practices for events are receiving increasing recognition from two directions: external pressures to comply with legal obligations and public concerns; and internal pressures to minimise risk, improve health and safety standards, conserve resources, maintain good community relations, create a positive corporate image and reduce costs (Stubbs and Chernushenko, 2003). Traditionally events were seen as part of the hospitality, tourism, leisure and recreation industries but they are now considered their own industry (Bowdin *et al.*, 2001), and therefore should be treated accordingly.

2.4.1 Licensing, permits and regulatory Issues

There are long lists of regulations to be consulted and adhered to when staging an event, which increase with event size. The correct procedure with regard to obtaining licenses and permits in one local authority or county within the UK may be completely different from that in another so careful research is important (Bowdin *et al.* 2001). It is the responsibility of the event organiser to find out and comply with all pertinent rules, regulations and licensing requirements. For example, in reviewing the Public Entertainment Licence (PEL) for Glastonbury Festival (2000), the report from the Environmental Health Manager to the licensing authority at Mendip District Council included input from a wide range of authorities including Environmental Health, Avon and Somerset Police, Somerset Fire Brigade and Festival Medical Services (Anderson, 2000). The following year the Glastonbury Festival was cancelled after gatecrashers totalled over thirty thousand in 2000 leading to worries over crowd safety and the prosecution of the organiser for breach of the entertainment licence. Bowdin *et al.* (2001) suggest that the event organiser devotes a significant amount of time to research for information on licensing and legislative requirements and previous events in the area in question. Some LAs have personnel or teams that advise event organisers of their responsibilities and the regulatory issues involved.

2.4.2 Stakeholders

Events are increasingly attracting the support of local government and the corporate sector because they can be used to serve a multitude of agendas from the needs of the audience to the requirements of local government objectives and regulations (Bowdin *et al.*, 2001). The event organiser must be able to identify the range of stakeholders

and manage their individual needs and requirements, despite the fact that they may often overlap. For example, UK Sport (1998) identify the key stakeholders for a major sporting event as including athletes, the British Olympic Association, broadcasters, coaches, event organisers, the general public, international federations, local authorities, the media, national government, national sports governing bodies, officials, sponsors, sports councils and volunteers.

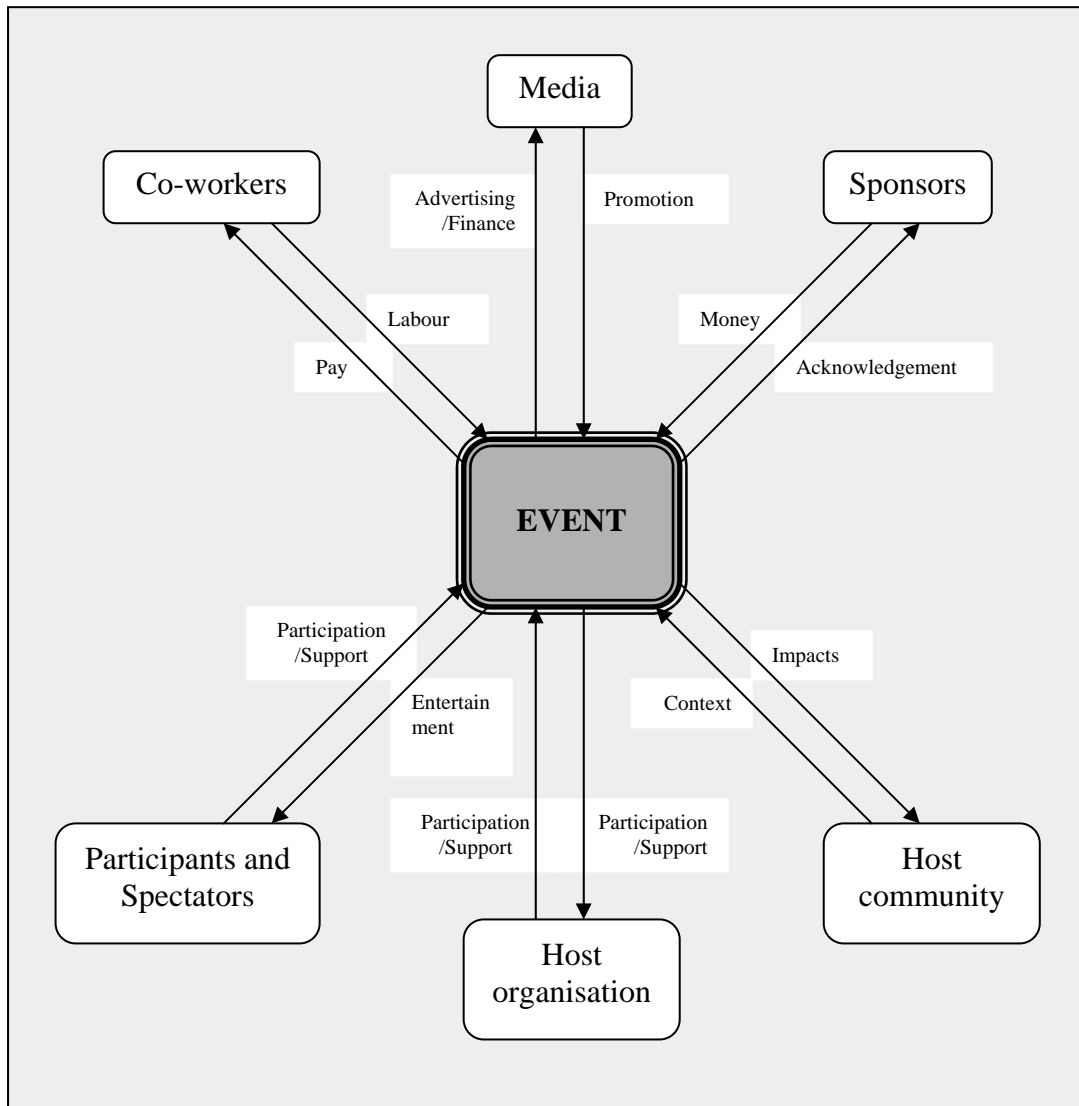


Figure 2.3 The relationship between stakeholders and the event (Source: Bowdin *et al.*, 2001, p.50).

Figure 2.3 illustrates how the range of stakeholders will interact with the event in terms of what they provide for the event and what the event provides for them. The

event organiser must consult with all the stakeholders in order to identify all the issues.

2.4.3 Impacts

An event is a good opportunity to showcase the unique characteristics of the host environment but the intrinsic properties of the destination may be delicate. Careful management planning is required to modify impacts that should involve consultation with local authorities. For example, the organisers of the Martell Grand National in Liverpool progressively reduced the traffic impacts of visitors thorough the years by developing a park-and-ride scheme and a shuttle bus system in collaboration with the LA (Bowdin *et al.*, 2001).

The event organisers are responsible for cleaning the site and restoring it to its original condition. The Leeds Festival in 2000 attracted a large audience (in excess of one hundred thousand) to a delicate area which led to trampling and soil compaction to such an extent that the local residents ensured that the event would not return to their area (Bowdin *et al.* 2001). The Lake District National Park Authority (1999, p.50) explains that the impact of small events can raise issues and they observe:

“...it is more important that the organisers of any event have taken account of the potential problems, and made every effort to avoid them, or reduce them to an acceptable level.”

The event manager will need to have a detailed plan of what the objectives and desired outcomes of the event are in order to plan it effectively. The physical characteristics will be important for certain events, such as sports events, and less important for others such as arts festivals that only require open space. The principal issues to consider when planning events in green field sites that may form part of the licence conditions are identified by Bowdin *et al.* (2001) as:

- Traffic arrangements – planning of effective routes to minimise traffic overload, protecting verges, park and ride schemes, car chare initiatives, and organising public transport.

- Parking management – solid ground, contingencies for bad weather including road cleaning.
- Waste management – collection of litter inside and outside the site, setting up recycling schemes, reducing waste production, identifying markets for reusable materials.
- Drainage considerations – identify where the site drains to ensure that drainage patterns are not altered by event.
- Safety – uneven surfaces for visitors.
- Noise control – identifying nearest sensitive receptors (including wildlife) and ensuring noise does not exceed thresholds.

Solving logistics problems like transport and parking can become a significant issue for event organisers and will form part of the license requirements for the event. For example, at the Glastonbury Festival in 2000, wheel-wash and road-sweeping facilities were introduced as a contingency against bad weather (as there was in 1999), to ensure that mud was not deposited on the roads that may lead to a safety hazard.

The incorporation of a waste management plan into the overall event plan has been used to great effect in order to secure the relevant licenses and to see them renewed. The Glastonbury Festival employs a labour intensive, but very effective, waste management and recycling strategy by contracting it out to Network Recycling. Network Recycling provide a complete waste management package for events ranging from Labour Party Conferences to the WOMAD Festival. They report that in 2003 the waste team at the Glastonbury Festival totalled over one thousand and that over fifty tonnes of waste were diverted away from landfill including recycling seventeen tonnes of cardboard, twenty-four tonnes of plastic bottles and cans, and eleven tonnes of glass (Network Recycling, www.networkrecycling.co.uk, accessed 03/07/03).

2.4.4 Existing risk assessment and management procedures

Risk provides the answer to three key questions: what can go wrong; how likely is it; and what are the consequences? (Kaplan and Garrick, 1981). Events are particularly susceptible to risks so risk assessment and management is widely used within the

industry, but mainly with regard to health and safety. According to the Royal Society (1992, p.8) risk may be defined as:

“...a combination of the probability, or frequency of the occurrence of a particular hazard and the magnitude of the adverse effects or harm arising to the quality of human health or the environment.”

The Health and Safety Executive (HSE, 1998) identify five steps that need to be taken to assess the risks associated with staging an event, presented in table 2.4.

Five step Risk Assessment	
<u>Step 1:</u>	Identification – establish all possible hazards.
<u>Step 2:</u>	Decision – decide who might be harmed and how.
<u>Step 3:</u>	Evaluation/control – evaluate the risks and decide whether the existing precautions are adequate or whether more should be done.
<u>Step 4:</u>	Recording – record the findings.
<u>Step 5:</u>	Review – detailed review of assessment and revise plan if necessary.

Figure 2.4 Five Steps to risk assessment for events (Source: HSE, 1998, p.3).

Large numbers of people congregating for an event will inevitably lead to hazards, however, the associated risks will vary according to the nature of the event (HSE, 1999). The information provided on risk assessment concerned with the environment is confined to the direct effects of leakages or spills, further highlighting the need for more in depth analysis.

Once the risk assessment is completed, a risk management strategy can be developed to mitigate or eliminate unacceptable risks (Brookes, 2001). In assessing trends and risks for the Glastonbury Festival in 2001, the organisers acknowledged that the rate of increase in gatecrashers suggested that there was a significant risk of the event being overcrowded. After considerable work to develop crowd controls the

community and authorities were not sufficiently confident that effective measures could be taken in time so the event was postponed for a year until adequate controls could be introduced (Bowdin *et al.*, 2001).

2.4.5 Event management cycle and environmental management

The relationship between large events and the environment is becoming more apparent as the potential benefits of becoming ‘greener’ are realised. Events are increasingly being viewed as an opportunity to show case the local environment, promote the event organiser, and advertise the sponsor. UK Sport (1999, p.10) note that:

“Major events and the environment are inextricably linked, and without due care events can impact adversely on the environment, directly or indirectly. Major events also have a very positive role to play in fostering understanding of environmental issues, raising awareness and generating resources. Particular attention will be paid to the environmental issues raised by very large numbers of people coming together for a short period of time, with subsequent problems of safety, congestion, consumption, and waste.”

Most events will not be subject to the requirements of regulations because they will not reach thresholds by themselves. Combined effects of events on the same site may be significant however. Therefore, many events, irrelevant of their size, would benefit from environmental management. Broadhurst (2001) states that even the smallest organisation, or even individuals can adopt the environmental management ethic, whether or not they adopt a formal EMS.

Figure 2.4 illustrates an event management cycle. The stages mirror the ‘plan-do-check-review’ of the best practice EMS cycle, but within three stages. The incorporation of an EMS can follow the same cycle.

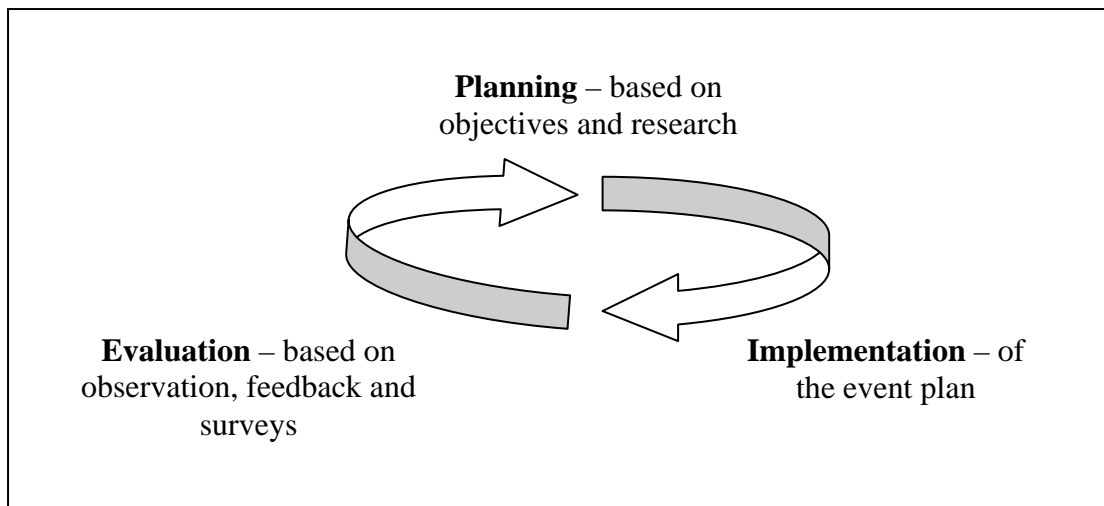


Figure 2.4 Evaluation and the event management process (Source: Bowdin *et al.*, 2001, p.271).

2.4.6 Best Practice: The Sydney Olympic Games, 2000

The Sydney Olympic Games in 2000 have set a benchmark, not only for the most successful staging of the Games to date, but also for the environmental management of an event (Follwell and Zingales, 2001). The Sydney Olympic Games' Environmental Guidelines were produced prior to the event, based on principles adopted at the United Nations Earth Summit, particularly that of sustainable development. Some of the initiatives that the Environmental Guidelines committed Sydney to during the planning, construction and running of the Games are listed in Appendix B. The Sydney strategy included genuine commitment and full integration of environmental concerns delivered through a partnership approach placing emphasis on education, training and communication (Stubbs, 2001). Five key performance areas were identified:

- Energy conservation
- Water conservation
- Waste avoidance and minimisation
- Air, water and soil quality (pollution management)
- Protection of significant natural and cultural environments

The early development of a common vision, the setting of challenging targets that required significant effort, and the development and implementation of a detailed EMS was crucial to the success of the Games (Stubbs, 2001). Follwell and Zingales (2001) report that the European Roundtable on Cleaner Productions workshop on ‘Sustainability and Large Scale Sports Events’ in 2001 note that: issues of transportation, water, energy, waste, purchasing materials and communication effect events of all sizes; and that an EMS approach can help to deal with these issues, provided that the scope and scale are tailored to the scale and nature of the event.

The scale of the Sydney Olympic Games’ achievement can be seen in the results. Over 70 % of all waste was diverted away from landfill and either recycled or composted. Furthermore, by using electronic media for communication and storage of information, rather than paper, there was a reduction of paper usage by 90 tonnes, or 16 million sheets from the previous Olympic Games in Atlanta (UK Sport, 2003).

2.6 Summary

LAs have a responsibility as the local government body, and through their commitment to the LA21 process, to manage their own impacts and to advise, assist and influence other business, including event organisers.

Large events have traditionally shown little consideration of their potential impacts. Risk assessments are completed for health and safety regularly so there is scope to extend this to environmental criteria.

EMSs provide a structured approach to identifying and managing the potential impacts that may arise. The event management cycle could incorporate an EMS from the event concept stage.

Chapter 2 demonstrated that a research need existed with regard to the degree of involvement that the LA has in greening events and to identify the current practice of environmental management within large events, and to then formulate a generic framework EMS. Therefore, this study was divided into three stages, illustrated in the form of a flow diagram in Figure 3.

The first stage involved the collection of data through the means of a postal questionnaire with the objective of determining the current practice of environmental management within LAs and to identify opportunities to guide the event industry. The second stage involved contacting event organisers (telephone and email) with the objective of identifying current practice and opportunities for the incorporation of environmental criteria. The final stage involved using the data from stages 1 and 2 and the information gathered in chapter 2 to formulate a generic model for environmental management of large events. This chapter describes the methods employed, the strategy behind the methods and the limitations of them.

3.1 Stage 1: Postal questionnaire

A copy of the questionnaire can be found in Appendix C.

3.1.1 Objectives

The questionnaire had the following secondary objectives:

1. To assess the current situation within the LA with regard to an EMS.
2. To assess the scope of a formal EMS to find out if it extends to large events within their locality.
3. To find out what sort of information is gathered when considering licensing and how it is gathered.
4. To gauge the perceptions of potential impacts arising from large events.
5. To analyse the relationship between LAs and event organisers, current and in the future.

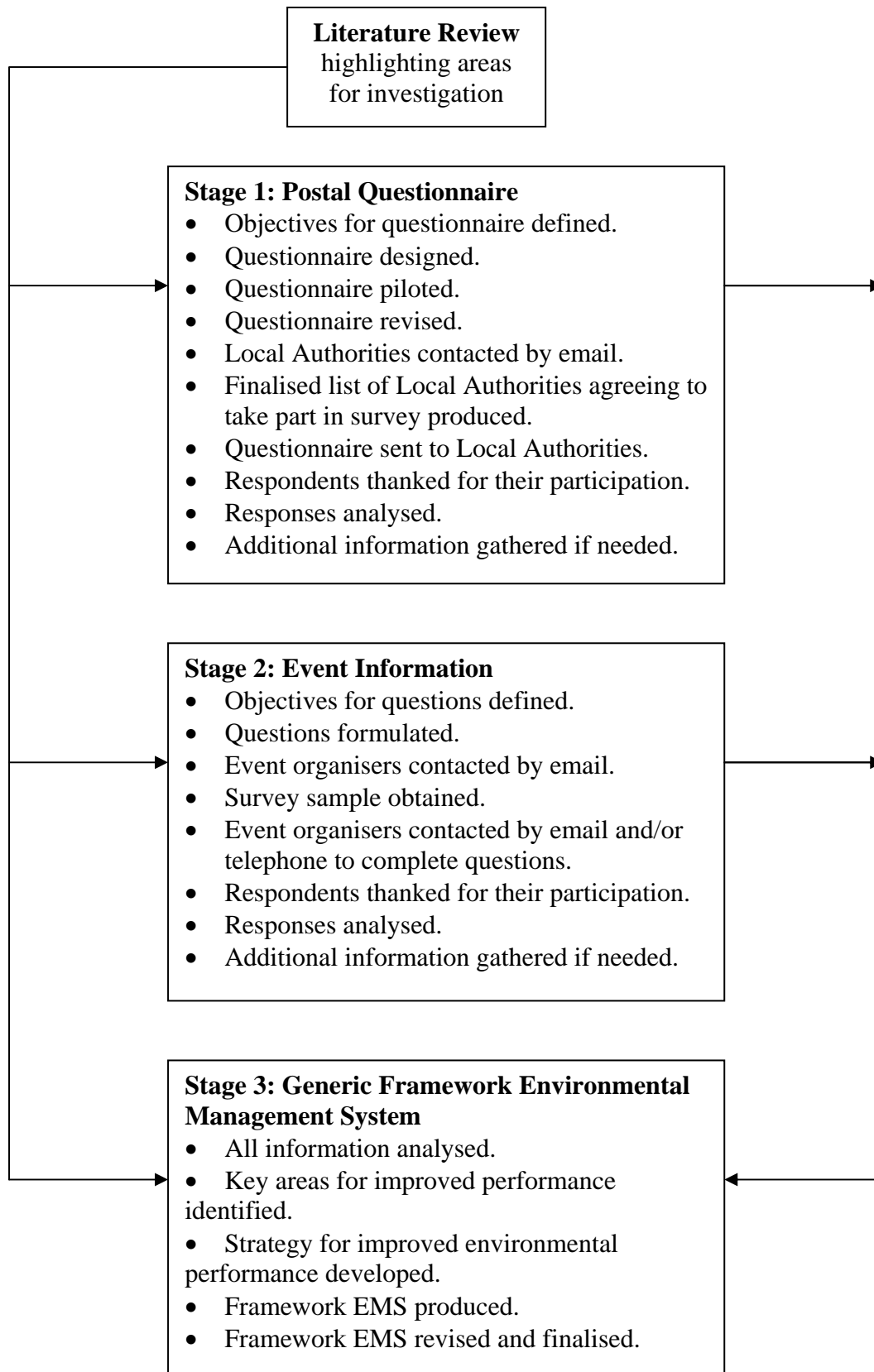


Figure 3.1 Flow Diagram illustrating methodology for project

3.1.2 Questionnaire design

The questionnaire was designed so that it was simple and easy to understand and to meet its objectives. It consisted of closed questions to gain factual information and open questions to obtain further information after the literature review had uncovered many grey areas. Telephone interviews with several LAs assisted with formulating questions that were delving yet always relevant.

Section A was only applicable to the LAs that had a formal EMS in operation in order to meet objectives 1 and 2. It was designed using closed questions to meet objective 1 (Questions 1-5) and an open-ended question (Question 6) to meet objective 2. Section B was applicable to the whole sample in order to meet objectives 3, 4 and 5. Question 8 (open-ended) was designed to fulfil objective 3 and to gather examples of good or bad practice. Question 9 used a scale ranging from ‘highly significant’ to ‘no impact’ to rate the respondents perception of the potential impacts from large events in order to meet objective 4. Questions 6, 10 and 11 were designed to assess the current relationship between LAs and event organisers and to identify opportunities in line with objective 5. Question 12 was optional inviting additional comments or advice.

3.1.3 Pilot questionnaire

In order to highlight any shortfalls or areas for improvement the questionnaire was sent to a contact at the London Borough of Sutton Council who are certified to EMAS. The pilot study highlighted the need for clarification of terminology and an extension of some questions to include examples to aid the respondent. As a result of feedback comments the questionnaire was modified prior to distribution.

3.1.3 Maximising response rate

The sample was chosen after speculative emails were sent to the environment department of 123 LAs requesting their help of which 46 replied positively. This was done to maximise response rate and to preserve resources (financial, time and paper) but was hindered due to difficulties in obtaining the most appropriate contact persons information. A copy of the generic framework EMS was offered as a further incentive for completing the questionnaire.

Once the contact list was finalised the participating LAs were given the choice of a post or email version of the questionnaire to suit their preference. A personalised cover letter detailing the nature of the research and the value of their contribution was attached to both versions and a prepaid envelope was included with the postal questionnaire. The University of East Anglia logo was included in the top right corner of all pages of the questionnaire and the return address for the postal survey was at the University of East Anglia to enhance the credibility of the survey.

A response time of 3 weeks was considered adequate and anonymity was offered to maximise responses and to increase the quality and quantity of information offered by respondents. Furthermore, a mobile telephone contact number was supplied in addition to the email contact if there were any further queries.

3.1.4 Additional information gathering

The questionnaire included a section asking the respondent if they would be willing to supply additional information via a telephone call. Some LAs were contacted after receiving their completed questionnaires to verify their response, expand their answer or to complete questions unanswered.

3.1.5 Sources of error

After analysing the responses it was clear that there were a number of errors contained within the questionnaire design that led to varied interpretation. Question 8 referred to the granting of Public Entertainment Licenses but failed to recognise that it is usually only the District Council that issue them so County Councils responded with “not applicable” and also that the environment department have little involvement with licensing issues so the feedback was limited.

A number of respondents had interpreted questions differently by identifying similarities in questions which led to comments such as “refer to previous answer” in order to reduce duplication. For example, Questions 6, 8 and 10 were consistently answered in a similar fashion.

3.2 Stage 2: Event information

The literature review identified areas of good and bad environmental practice within the events industry. In order to obtain specific information on events to assist in the formulation of the framework EMS a small sample of 6 county show organisers who were contacted when the project was in its infant stage, were asked to complete a few short questions to fulfil the objective stated at the start of this chapter. The framework EMS was offered as an incentive for their involvement. The number of questions was confined to 3 in order to obtain supplementary information.

3.2.1 Questions for event organisers

The questions below were asked during telephone calls to 6 county show organisers after email contact had confirmed their agreement to participate.

1. How are environmental issues at the event such as waste management and transport dealt with and what steps are taken to minimise impacts?
2. Is environmental management incorporated into the event plan?
3. Please could you provide details on the number of visitors, number of vehicles (and type if possible), waste production and energy consumption during the event.

3.3 Stage 3: Formulating a framework EMS for large events

Using the results from stages 1 and 2 and the information from a comprehensive literature review the framework EMS was developed with the aim of providing a useful document for event organisers to manage their potential environmental impacts.

3.3.1 Objectives

The EMS had the following secondary objectives:

1. To be practical and applicable.

2. To be understandable to the lay person.
3. To be flexible.

3.3.2 Sources of error

During the development of the model the wealth of information was very difficult to reduce to a short framework. Due to differences between venues, types of event, size of event and nature of event the applicability may differ. Furthermore, events that take place regularly will find the potential for implementing an EMS far greater than those that are one-off.

3.4 Summary

A questionnaire was sent to LAs in order to further understand their position with regard to environmental management and large events. A set of questions was put to a small sample of event organisers to gather a set of facts and figures highlighting issues to aid the development of the framework EMS.

Chapter 3 discussed the methods employed to obtain the results presented and discussed in this chapter from the postal questionnaire, the questions to event organisers and the completed framework EMS.

4.1 Stage 1: Postal questionnaire

The questionnaire was distributed to 46 LAs who had agreed via email to take part in the research. The questionnaire was sent via post or email as requested by the individual. Of the 46 questionnaires sent there were 27 responses within the allotted three week time frame representing a 59% response rate. The responses are discussed in the context of the objectives outlined in the methods in chapter 3.

4.1.1 Objective 1: Assessing the situation within LAs with regard to EMSs

Of the 27 respondents 56% (see Table 4.1) had developed and implemented a formal EMS and they had been operating from a range of 4 months to 4 years with an average of 1 year and 8 months. Furthermore, 40% (see Table 4.2) of the respondents with EMSs had been certified to the Eco-Management and Audit Scheme (hereafter EMAS) and had been so for an average of 2 years and 4 months. The responsibility for the development and progress of the EMS lay with an environmental team for all of the LAs certified to the EMAS indicating that it is good practice to have a team effort. 2 of the uncertified LAs also used a team with the other 7 relying on an environmental manager to co-ordinate.

Is an EMS in operation? (n=27)	YES	NO
Number of Respondents	15	12
Percentage of Respondents	56	44

Table 4.1 Number of respondents with a formal EMS in operation

Is the EMS certified to EMAS? (n=15)	YES	NO
Number of Respondents	6	9
Percentage of Respondents	40	60

Table 4.2 Number of respondents with an EMS in operation that is certified to EMAS

Figure 4.1 illustrates the information that is being communicated to the local community about the EMS. 93% of the respondents communicated the environmental policy to the local community and 40% communicated the environmental review and progress reports. These figures are somewhat surprising when considering the range of methods used to communicate this information (Figure 4.2).

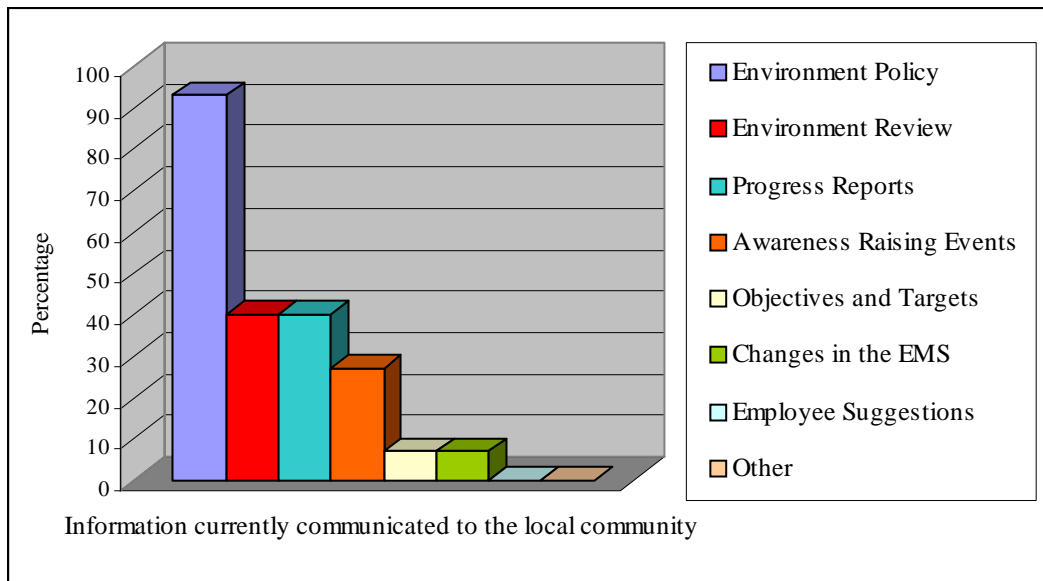


Figure 4.1 The percentage of LAs with an EMS communicating information on their EMS to the local community

87% of the LAs that had an operational EMS claimed to use the internet as a method of communicating information to the local community. This was by far the most popular media used as results in the other categories were well spread. It is surprising that there was not more information communicated about the EMSs when the internet

is so resource efficient (time, finances and personnel). Furthermore, the internet provides an ideal opportunity for LAs to lead by example and showcase environmental initiatives in order to extend the application of environmental management into business and the community.

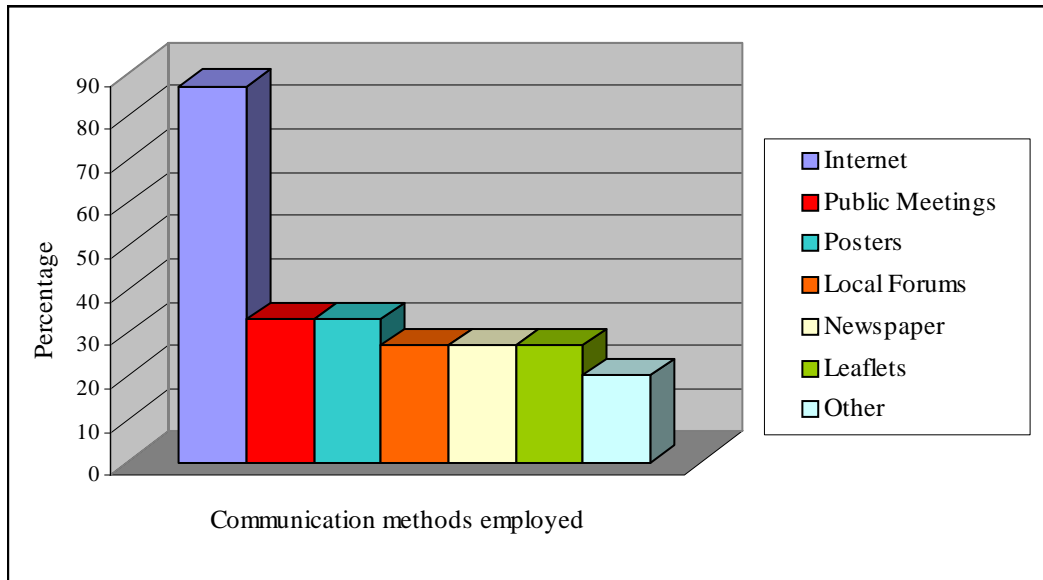


Figure 4.2 The EMS communication methods employed by LAs

4.1.2 Objective 2: Assessing the scope of a formal EMS to find out if it extends to large events within their locality.

The LAs that operated an EMS were asked if there was any formal application of it to large events. All 15 respondents did not apply their EMS to large events although 1 stated that they would if they organised the event. 2 of the LAs had produced documents on waste management issues for large events, a copy of Leicester City Councils 10 point recycling guide can be found in Appendix D. 3 of the respondents stated that their EMS did not currently consider events but that they thought they should, and this study had highlighted the issue.

The key finding when considering objective 2 is that the current situation within the LAs that have developed and implemented a formal EMS is varied and that there is no application of the EMSs to large events within their localities.

4.1.3 Objective 3: Assessing the types of information gathered when considering licensing and how it is gathered

Table 4.3 lists the range of responses regarding the information gathered by LAs prior to granting a Public Entertainment Licence (PEL).

Sample responses to the type of information gathered when considering the granting of Public Entertainment Licenses (PEL)
<ul style="list-style-type: none">• 14 (52%) replied that this was not applicable. The reasons given were that: the person filling out the questionnaire was unfamiliar with the PEL process; the person filling out the questionnaire was from a county council when it is the district council who issue PELs; and that the environmental impacts were not a significant issue for events.• 7 (26%) said that they consult with the event organiser, the local community and any other relevant authorities (such as the emergency services) to raise issues and resolve problems.• 4 (15%) use data from previous events to identify potential problem areas.• 3 (11%) relied on information provided by the event organiser.• 3 (11%) considered issues to do with health and safety only, which sometimes included environmental issues.• 1 LA stated that they ensure that there are adequate systems and monitoring measures set up by the event organiser to ensure compliance with legislation.• The Royal Borough of Windsor and Maidenhead stated that they had established a Safety Advisory Group for events. The group present a standard form to each event organiser that contains environmental criteria for consideration prior to the granting of a PEL. The group also advises on key responsibilities and raises issues, including environmental. If deemed necessary the group will co-ordinate meetings with the event organiser and relevant stakeholders to formalise plans.

Table 4.3 Information gathered when considering the Public Entertainment Licence applications

52% of the sample replied ‘not applicable’ due primarily to the County Council respondents not dealing with PELs. 26% actively consult with the relevant

stakeholders in order to identify and manage all the potential issues. 15% relied on previous event data and 11% used the information provided by the event organiser only. The vast range of responses highlights the inconsistent approach amongst LAs. An example of best practice is the Royal Borough of Windsor and Maidenhead who have established a Safety Advisory Group for events that deal with a range of issues, including the environment, and provide vital advice and assistance to event organisers. There is a significant opportunity to develop a formal set of guidelines in order to ensure that environmental criteria are represented during the licensing process.

4.1.4 Objective 4: Gauging the perceptions of potential impacts arising from large events

Figures 4.4 and 4.5 illustrate the respondents perception of the potential impacts associated with large events using a scale ranging from ‘no impact’ to ‘highly significant’. The short term impacts were perceived to be greater than the long term impacts, especially with regard to traffic, waste production and soil compaction. All the respondents considered the short term impacts associated with traffic to be highly significant (30%) or significant (70%). Soil compaction was perceived as highly significant by 37% and significant by 56% of the respondents. 78% of the sample perceived the impacts associated with waste production to be of a significant or highly significant nature in the short term.

The perceived long term impacts were much lower than the short term with most respondents answering insignificant or no impact to all of the categories. The impact of soil compaction was considered to have the greatest significance (11% highly significant, 41% significant) in the long term and waste production was perceived significant by 26% of the respondents. The long term impacts associated with energy consumption were perceived to be insignificant or of no impact by all respondents and the stress on flora and fauna were perceived to be significant by just 7% of the sample in the long term.

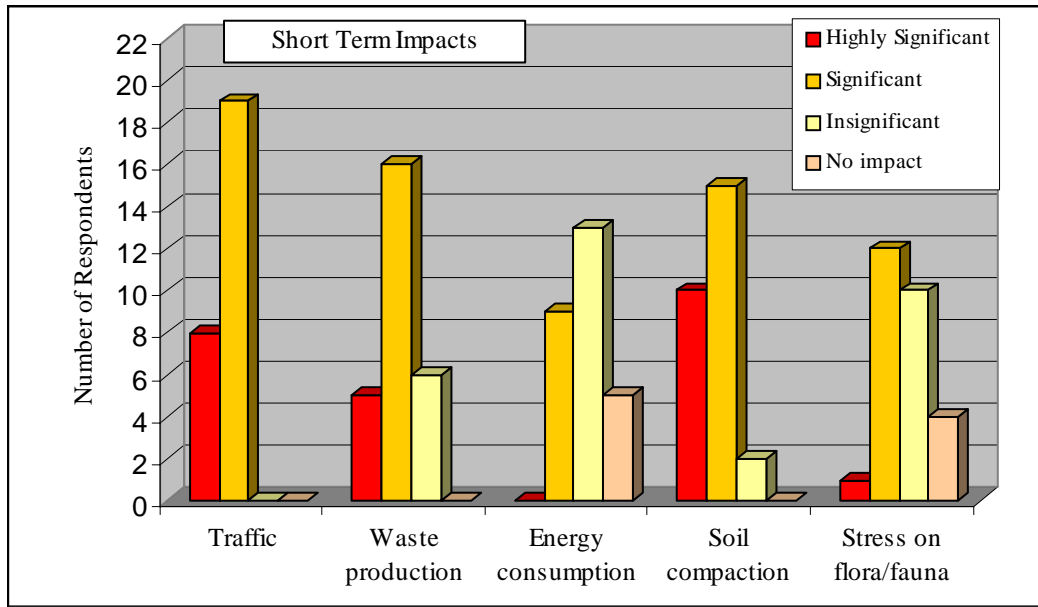


Figure 4.4 Perceived potential short term impacts associated with large events

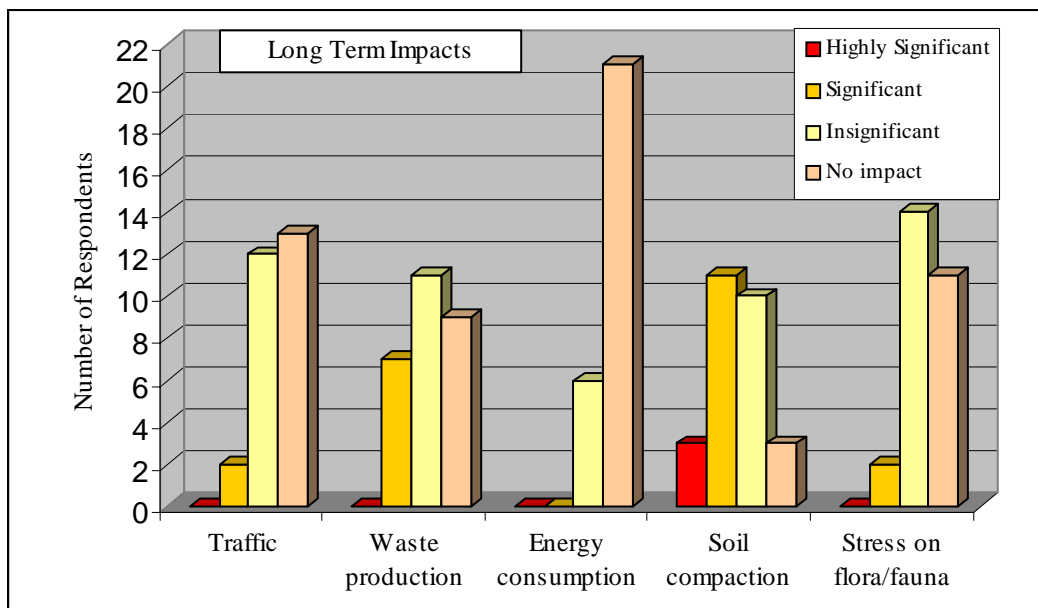


Figure 4.5 Perceived potential long term impacts associated with large events

The perceptions also showed great variations but the general trend was that all the categories posed potential short term impacts, but in the long term they were not significant. Bowdin *et al.* (2001) discuss the short term impacts as carrying a far greater significance but also note that the cumulative impacts of events may have considerable long term implications. The results highlight the fact that it is recognised

by LAs that there is potential for significant impacts from events, especially in the short term, further highlighting the need for environmental management.

4.1.5 Objective 5: Analysing the relationship between LAs and event organisers, in the present and the future

All respondents believed that the environmental impacts associated with large events were the responsibility of the event organiser, although 7 (26%) thought that the landowner was also responsible and 3 (11%) thought that the LA had some responsibility (Figure 4.6). A partnership between all groups is identified by UK Sport (2003) as the most comprehensive approach to environmental management, although it is recognised that ultimate responsibility will remain with the event organiser.

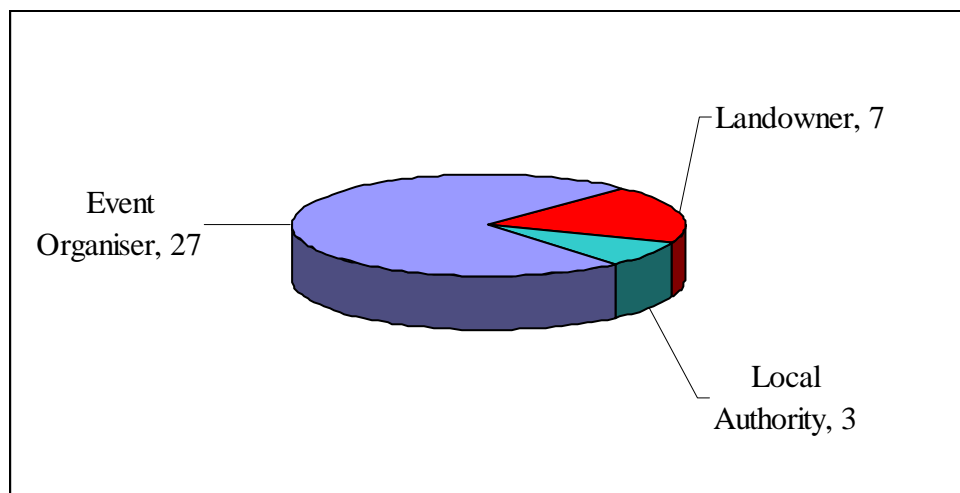


Figure 4.6 The responsibility for environmental impacts associated with large events

Table 4.4 lists the range of responses received regarding the current methods employed by the LA to help to reduce the environmental impacts that may arise from large events. Netherwood and Shayler (1996) state that the LA has a key role as a facilitator and an educator, however, 30% of the sample claimed to have no involvement unless requested by the event organiser. Advice, assistance, monitoring and regulating were practiced by 26% of the sample although they were often only in certain areas such as waste and transport. Public consultation is described by UK Sport (2003) as an essential part of the greening of events but was actively encouraged by just 19% of the LAs responding to this survey.

Sample responses about the current measures employed by the Local Authority to reduce the environmental impacts arising from events

- 8 (30%) claimed that they did not get involved unless requested to do so by the event organiser.
- 7 (26%) offer advice and assistance throughout the event from conception to completion although it was generally stated that this was with regard to waste management and transport issues.
- 7 (26%) claimed that they monitored the events on occasions, mainly with regard to noise and usually following complaints.
- 7 (26%) took an active role in regulating the event and the venues.
- 5 (19%) encourage public consultation prior to the staging of a large event with 1 also stating that they took on a co-ordinating role ensuring that the event organiser liaised with all relevant stakeholders.
- 4 (15%) stated that the environment was only considered by the LA if they were the event organiser as well.
- 3 (11%) ensured that there were sufficient transport plans but it was not stated whether this meant that public transport schemes were encouraged.
- 3 (11%) claimed that they took an active role in training event organisers, but it was not stated what this entailed.
- 2 (7%) produce documents to assist event organisers. Leicester City Council provide event organisers with their 10 point recycling guide (see Appendix D) and the Royal Borough of Windsor and Maidenhead produced an environmental checklist and have a Safety Advisory Group for events (see Table 4.3).
- 2 (7%) claimed that they had no involvement as it was not their problem.
- 2 (7 %) consider health and safety issues only.
- Durham County Council occasionally makes recommendations based on the findings of their county ecologist about the timing and/or location of the event.

Table 4.4 Ways in which the Local Authority help to reduce the environmental impacts that may arise from large events

Sample responses regarding the measures that may be introduced by Local Authorities to help to reduce the impacts of large events in the future

- 11 (41%) stated that the introduction of formalised corporate guidance documents and procedures would be welcomed as well as environmental checklists.
- 8 (30%) felt that an active programme of advice and assistance would be successful with 3 (11%) also claiming that the establishment of an event team that dealt with all matters would be useful.
- 7 (26%) felt that this was not an issue for LAs, it was for event organisers.
- 4 (15%) claimed that encouraging recycling schemes and offering reduced entry to events for those travelling by public transport or park-and-ride would be a positive step.
- 3 (11%) felt that the LA could play a key role as a co-ordinator to ensure that all parties were satisfied with the event strategy.
- 3 (11%) thought that the LA should enforce conditions of use more actively and that the organiser should always pay for clean up costs.
- 2 (7%) stated that there could be greater education and awareness by organisers and the community as a whole.
- 2 (7%) would promote carbon neutral events.
- 1 respondent noted that it is an issue that is difficult to resolve because the LA wants to actively encourage events because of the associated benefits. This means that an authority applying best practice environmental measures may be seen as “more hassle than it is worth” when there are a variety of locations to choose from. If there was a level playing field via corporate guidelines it would be more appropriate and practical.

Table 4.5 Ways in which the Local Authority could help to reduce the environmental impacts that may arise from large events in the future

Table 4.5 illustrates the multitude of suggestions for future ways for LAs to help event organisers to reduce their environmental impacts. 41% of the sample claimed that they would welcome the introduction of standardised guidance documents and procedures when considering events, which is a key objective in the sports event market (Follwell and Zingales, 2001). 30% felt that active programmes of advice and

assistance would be useful with a further 11% claiming that the establishment of an event team within the County Council would be a good measure. 26% were adamant that this was not an issue for the LA further highlighting the varied beliefs of individuals. Other measures highlighted included encouraging recycling schemes, offering reduced entry to visitors using public transport or park-and-ride schemes and promoting carbon neutral events.

4.2 Stage 2: Event information

Six county show organisers were contacted by telephone to answer the questions set out in chapter 3 to fulfil the objective of identifying current practice and future opportunities for incorporating environmental criteria into the event management plan.

There were varying responses to how environmental issues were dealt with at the event and the steps taken to minimise impacts (Table 4.6). All 6 event organisers contracted out waste removal, and transport issues were not addressed apart from the Royal Norfolk Show that offered reduced entry for those using the park-and-ride scheme. The Great Yorkshire Show and the Bakewell Show carry out a risk assessment of potential pollution sources with the assistance of the Environment Agency and the LA which is an example of good practice. All respondents claimed that there was a degree of liaison with the LA, but also stated that it was not utilised to discuss environmental options. The organisers of the Devon County Show stated that for some years they have been trying to introduce a recycling scheme but the LA refuse to assist by providing the facilities. Environmental management was not incorporated into the event plan by any of the respondents.

County Show	Management of environmental issues
Bakewell Show	<ul style="list-style-type: none"> • Contract out waste removal. • Liaise with council about transport. • Employ council for removal of sewage on site. • Risk assessment completed with Environment Agency and council to ensure potential pollution sources are minimised.
Royal Lancashire Show	<ul style="list-style-type: none"> • Contract out waste removal which includes recycling bins situated around site for glass and cardboard. • Contract out energy provision via generators.
Royal Cornwall Show	<ul style="list-style-type: none"> • Contract out waste removal. • Reduced admission for public transport use.
Devon County Show	<ul style="list-style-type: none"> • Contract out waste removal and energy provision. • Tried to introduce recycling but council will not provide the facilities.
Great Yorkshire Show	<ul style="list-style-type: none"> • Contract out waste collection but also employ litter pickers during and after event. • Permanent electricity source on site but also subcontract for provision of generators. • Risk assessment completed with Environment Agency and council to ensure potential pollution sources are minimised.
Royal Norfolk Show	<ul style="list-style-type: none"> • Contract out waste removal. • Another contractor deals with recycling bin pick up (bottle and can). • Reduced fares for park-and-ride users. • Liaison with council in order to try to separate waste also.

Table 4.6 The methods for dealing with environmental issues and steps taken to minimise impacts

Table 4.7 presents the information requested on numbers of visitors and vehicles, volume of waste and energy consumption during the events. The event organisers generally had little idea of anything but the number of visitors which is easily calculated in gate receipts. There is, therefore, a need to gain some baseline data in order to design environmental initiatives to reflect achievable, yet challenging targets for improvement.

Event	No. of Visitors	No. of Vehicles	Volume of Waste	Energy consumed
Bakewell Show	55000	?	?	?
Royal Lancashire Show	60000	?	25 tonnes	?
Royal Cornwall Show	110000	More than 20000	?	?
Devon County Show	95000	?	?	?
Great Yorkshire Show	125000	25000 daily vehicle movements	105 tonnes	17500 kwh/day
Royal Norfolk Show	95000	18000	?	?

Table 4.7 Event information

All respondents stated that the volume of waste could be calculated by the contractor, but apart from the 2 who provided the volume of waste, the other county shows had not utilised this service. The 3 shows that provided information regarding traffic

movements indicate the significance and importance of developing a traffic management plan with figures in excess of 20000 vehicles visiting the show site over the course of a weekend. It is hypothesised that there would also be a large number of heavy duty vehicles delivering livestock and produce as well as equipment for stalls, show arenas and marquees.

4.3 A generic framework EMS for large events

The framework EMS was built using data gathered in stages 1 and 2 and literature reviewed in Chapter 2. The specific texts that aided the formulation of the EMS are as follows: Bowdin *et al.* (2001); Follwell and Zingales (2001); Green & Gold (1999); Netherwood (1996); Sheldon and Yoxon (1999); Stubbs (2001); Stubbs and Chernushenko (2003); UCI (1999); and UK Sport (2003).

It is important to note that this is not a definitive answer. It is a framework that will require effort, commitment, resources, and lateral thinking to ensure that it is applicable, and as comprehensive as possible. The data collected from LAs identified a number of opportunities to fulfil their role as a facilitator and an educator in order to improve environmental performance within the event industry. The data collected from event organisers showed that the environment was not currently incorporated into the event management cycle. The potential benefits of ‘greening’ events may be seen in the form of cost savings or one of the following:

- Risk reduction leading to lower insurance and clean-up costs.
- Improved morale among staff and volunteers.
- Faster approvals for licences.
- Greater appeal to sponsors.
- Increased public support.

In order for an event to improve its environmental performance it requires a range of factors to be present. Figure 4.7 illustrates some of the key elements to incorporating the environment into the event. The level of commitment cannot be underestimated as successful environmental performance requires heavy investment of resources, human

and financial, but will ultimately put the event in a position that will be forced upon it in years to come as legislation and societal values prioritise the environment. Furthermore, the potential sources of funding through sponsorship for large events are increasingly attracted to environmental initiatives and then there are the knock-on positive media benefits (UK Sport, 1999, and UCI, 1999).

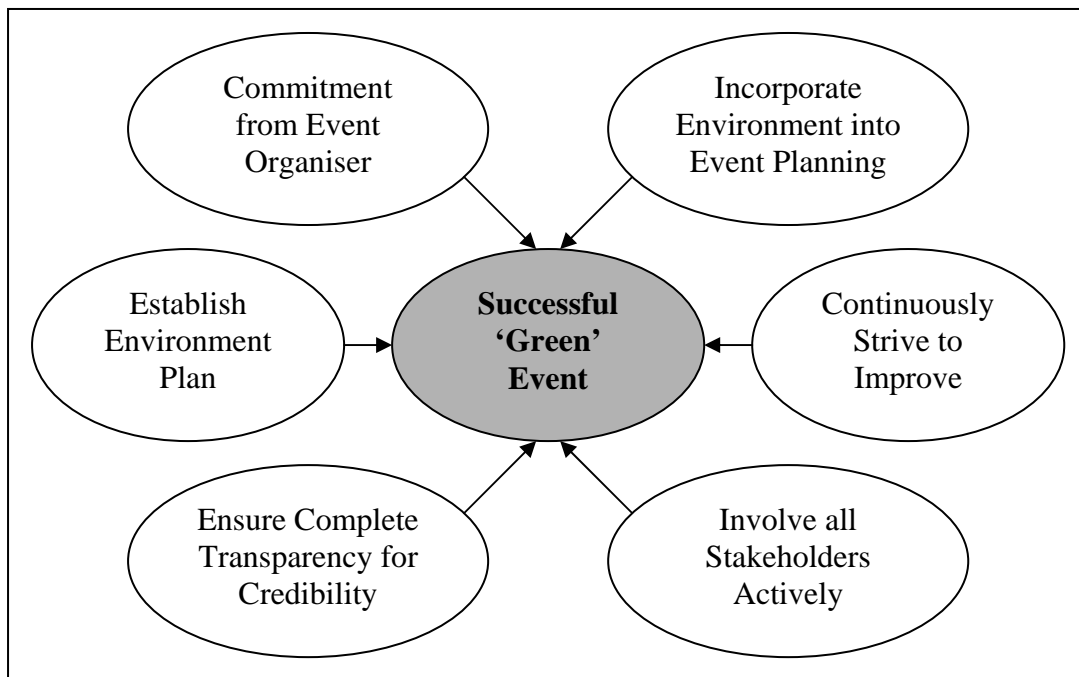


Figure 4.7 Key criteria for staging a successful 'green' event

The generic framework EMS is presented in the form of a 10 step model with explanations of key components of each stage.

Step 1: Commitment

Sheldon and Yoxon (1999) state that commitment is one of the most important factors when attempting to implement a successful EMS. It should be from top management and must be from the initial stages of the event concept right through the event lifecycle until the event is over. The reasons behind the commitment may vary from improving corporate image to avoiding prosecution, but ultimately the level of commitment should remain high whatever the driving force.

Step 2: Initial Environmental Review (IER)

In order to manage and improve the environmental performance of an event it is essential to have some baseline information and an understanding of the most relevant issues. Stage 2 illustrated the need for data as the events investigated did not have this information. The IER provides the baseline information from which future progress can be measured and the EMS can be built. The review will identify areas of risk as well as opportunities to integrate environmental actions into the operational structure. The International Cycling Union (UCI, 1999) also state that all the data should be recorded and the significance of the potential impacts should be calculated. Sheldon and Yoxon (1999, p.32) propose that an IER should ask the following questions:

- *What are the key issues?*
- *What is required to ensure legal compliance?*
- *What are others doing and how can we learn from this good practice?*

The key issues should be identified using the following categories: conservation of biodiversity, landscape and cultural heritage; pollution management with regard to soil, water and air quality; waste management; water resource management; energy efficiency; and materials and purchasing. Key questions to ask in each of these categories and the principal impacts and measures that can be taken to minimise them are discussed further in Appendix E. It is useful at this stage to collect information in a unit of measurement that can be monitored and compared to illustrate the environmental performance but a lot of the data will invariably be qualitative.

Identifying legal requirements is well practiced in the event industry but not always with regard to the environment. The Local Authority is a good place to start but there will also be information available from previous users of the site, the site owners, the Environment Agency and other interested parties (e.g. local interest groups).

As the events industry grows, so too does the amount of events that adopt good practice environmental strategies. Research into other events and initiatives that have been tried with success or failure will provide further information as well as highlighting some of the main issues to research.

Once the baseline information is complete opportunities for making the event more environmentally friendly can be identified and the EMS can begin development. When adapting an EMS for application to an event the IER should be viewed as an environmental evaluation that includes consultation with relevant parties, evaluation of impacts, and identification of possible preventative measures.

Step 3: Produce an Environmental Policy

In the case of an event there will normally be two principal parties, the organiser and the venue, that should both agree the policy in order to establish a firm commitment to implement and improve the EMS, although it is recognised that improvement will not be easily measured for one-off events. It is important that it identifies the main issues for the event (as discovered in the IER), states the commitment to improved environmental performance and the actions that will be taken to manage the issues. It is good practice to make this document publicly available.

Step 4: Setting Targets and Objectives

The objectives and targets should be in line with the environmental policy and the significant impacts identified in the IER and they should be Specific, Measurable, Achievable, Realistic and Time-bound (SMART). It is important to set challenging targets that require effort in order to maintain their credibility but at the same time they must be attainable.

Step 5: Environmental Management Programme

It is important to initially identify what resources are required, in terms of human, physical and financial in order to meet the targets. Responsibilities can then be assigned which could take the form of an environmental team incorporating staff from different areas within the event. The environmental management programme can now be developed. Sheldon and Yoxon (1999, p.108) state that if you can answer the questions and issues raised in the following 7 step model then your environmental management programme will fall into place:

Step 1 Information:

- *What do you already know?*

- *Who has the information?*
- *What form is it in?*

Step 2 Involve others:

- *Who are the key staff?*
- *Arrange to meet key staff.*
- *How can you get them on board?*

Step 3 Set targets. Get SMART and set targets that are:

- *Specific: what will you do?*
- *Measurable: how will you know you've done it?*
- *Achievable: can it be done?*
- *Realistic: does it make sense?*
- *Time bound: when can you do it?*

Step 4 Plan:

- *Agree a plan together.*
- *Write it down.*
- *Who will do what?*
- *Resources required.*
- *Set a timetable.*

Step 5 Commitment and leadership: get senior management on the side of environmental management.

Step 6 Action: get on with it!

Step 7 Review your progress:

- *Keep a check on what is happening.*
- *Does it match your plan and expectations?*

Step 6: Training and Awareness

It is important to initially identify what training is required and where. Preparing a brief document explaining the key components of the EMS can be circulated to staff and a workshop can be organised to raise awareness and ensure that individuals understand their role and the importance of it. Contractors and subcontractors should also be aware of any relevant procedures on site.

Step 7: Communication

Effective communication is the key to delivering the EMS successfully. It is vital that who needs to know what, when they need to know, and what they need to do is established in order to approach it systematically. The information being communicated should always be clear, concise, transparent and understandable. It is important to understand who the receiver of the information will be and develop the communication strategy around them making use of a variety of techniques and media for delivery. For example, it may be most appropriate to communicate to staff using an electronic system with technical language whereas a visitor to the event may require simple written information on an event programme.

It is important that there is a two way communication channel both internally and externally. Feedback is a vital part of any system that will highlight issues previously unaware and convey transparency.

Step 8: Documents and Control

Ensure clear and concise documents are kept regarding all EMS functions in order to provide a historical record and to see the future direction.

Step 9: Operational Control

In order to steer intention through to reality then it is vital that the relevant operational controls are in place and working. Current practice needs to be constantly viewed with a critical eye and opportunities for improvement investigated. Emergency situations are an important area of investigation and can be linked in with health and safety systems.

Step 10: Monitoring and Internal Audit

Monitor the success of targets by collecting data and comparing it to the baseline and/or previous events. It may be useful to complete an internal audit during the event on a particular area such as waste or transport to get more detailed data to highlight areas for improvement.

4.4 Summary

The involvement of the LA with the event industry is variable and often falls short of their role as a facilitator and an educator. There are considerable opportunities to extend environmental management into the events industry and for the LA to advise, assist and guide events in a sustainable manner to ensure that events do not leave a negative legacy behind them.

The results from Stages 1 and 2 have provided adequate information in order to generate the generic framework EMS. The role of the generic framework is to provide the event manager with a basic toolkit for building their own EMS.

The data collected during the study has been analysed and used to develop the framework EMS, in order to address the overall objective and aims of the study. The individual aims and overall objective are reviewed below, and then the limitations of the study are discussed, followed by the opportunities for further research and the final concluding statement.

5.1 Review of aims and objective of project

The aims and objective were initially stated in chapter 1.

5.1.1 Aim 1: The role of LAs with regard to large events, and how they may advise and assist with the environmental impacts of large events

Of the 27 LAs that responded to the questionnaire, over half had implemented formal EMSs, but none had extended the use to cover large events. It was frequently stated by respondents that the environmental issues arising from events were the event managers sole responsibility, yet the information reviewed in chapter 2 described the role of the LA in terms of a guardian for the community, a service provider, a facilitator and an educator. Furthermore, opportunities for involvement were frequently identified as the LA already plays a key role in advising and assisting with matters regarding health and safety.

Licensing rarely considered environmental criteria, and when it did it was devoid of the thorough approach demanded of health and safety issues. The best example offered was that by the Royal Borough of Windsor and Maidenhead who operate a Safety Advisory Group whose prime responsibility is to ensure that events in the area are advised and assisted throughout their lifecycle. This approach ensures compliance with legislation as well as developing the opportunity to establish partnerships and best practice guidelines.

LAs have to involve themselves with the event industry and form partnerships rather than distancing themselves. The internet provides an ideal opportunity for

communicating strategies for environmental protection as well as showcasing their own environmental initiatives.

The opportunities for improvement, identified by LAs, included producing standardised guidance documents, developing active programmes offering advice and assistance and establishing event teams with the LA.

5.2.1 Aim 2: Issues involved in event management and the degree to which the environment is considered through extensive research and communication with event organisers

Chapter 2 introduced the event industry and illustrated the lack of awareness with regard to the environment. There are isolated examples of good practice involving risk assessment and consultation exercises, but generally the environment receives little recognition. The event industry has begun to acknowledge the importance of environmental protection, especially in sports events, which has led to a number of guidance documents. However, these documents are aimed at major sporting events such as the Olympic Games rather than the large events such as county shows or music festivals. The literature reviewed identified opportunities for the incorporation of environmental management into the existing event management cycle.

Specific data gathered from the organisers of county shows highlighted a number of issues. For example, refuse collection is contracted out with little consideration of possible waste strategies. Risk assessments were completed by 2 of the shows in conjunction with the LA and the Environment Agency, but generally there was little liaison with the LA on environmental matters. There was a lack of data on waste produced, energy consumed and vehicle numbers further emphasising the need for baseline data.

5.1.3 Aim 3: Design a flexible, transparent and effective generic framework EMS for large events that may be used by anyone associated with large events as a reference for best practice

The generic framework EMS was produced using information from all previous research. It was designed to be used by event managers but at the same time the concept of forming partnerships with all stakeholders is imperative for it to be successful. Furthermore, when producing the framework, a number of issues of concern were identified. There is a need for formal guidance on environmental management for event managers on their responsibilities, and for LAs on environmental criteria for consideration prior to granting licences.

5.1.4 Overall Objective: Assessment of the event management sector and environmental management within local government to produce a generic framework EMS for application to large events

By fulfilling the 3 aims it is concluded that the overall objective was met. However, perhaps the most important finding from this study is that the event industry is far larger than originally hypothesised, and its expansion continues as the potential benefits are recognised. There is undoubtedly a mass of information stored within LAs and event companies across the UK and other countries, but access is restricted. The production of a framework EMS for large events is intended to aid environmental consideration, but it is acknowledged that this will not occur without a detailed study of all aspects of the events industry, from site selection to post-event clean up. Then it will be possible to produce guidelines for event organisers and the LAs regulating them, which in turn will necessitate environmental management across the industry.

5.2 Limitations

Obtaining data from LAs proved to be problematic. 46 LAs agreed to complete the questionnaire with email confirmation, yet only 27 were returned. This small sample size may have produced results that were not representative of the state of LAs across the UK.

Many of the respondents had to be contacted again to verify answers and “fill in the blanks”. The reasons given were primarily time and effort based. Furthermore, additional information was rarely offered or produced when requested.

5.3 Suggestions for further research

The establishment of a formalised environmental checklist for event managers to complete and submit with the Licence application was requested by 41% of the survey sample. Therefore, a comprehensive study on the granting of Licences for events would provide valuable information and highlight further opportunities for guidance.

In addition, detailed analysis of the events industry would provide greater insight into the issues and challenges of a rapidly growing business and identify the opportunities for integrating environmental management with the pre-existing health and safety systems required.

5.4 Concluding Statement

This dissertation has established that the events industry requires a new approach that incorporates environmental criteria from the event concept stage and through the entire event lifecycle. The EMS approach offers the ideal framework that can be integrated into the existing event management cycle. Furthermore, the Local Authority has a key role as a guardian for the community, a service provider, a facilitator and an educator that can positively influence, advise and assist the events industry on environmental matters, as already established in health and safety.

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APPENDIX A

Component	Description
Environmental Policy	<ul style="list-style-type: none"> • Must contain overall aims and commitment to improvement and to compliance with relevant legislation and regulations. • Should have a broad list of issues and responsibilities. • Must be corporate statement adopted by whole organisation.
Environmental Review	<ul style="list-style-type: none"> • Evaluation of environmental performance in relation to the regulatory and policy context. • Addressing actual effects and potential effects. • Scoping of issues followed by detailed review.
Environmental Programme	<ul style="list-style-type: none"> • Specify actions to translate the aims of the policy into detailed objectives for improvement. • Should include: indicators, targets, timetables, delegated duties, resource implications.
Environmental Management System	<ul style="list-style-type: none"> • Organisational responsibilities and mechanisms for implementing the programme. • Should include corporate overview and co-ordination system.
Audit Cycle	<ul style="list-style-type: none"> • To assess the achievements of the programme and the adequacy of the management system. • Must be done at least every three years.
Environmental Statement	<ul style="list-style-type: none"> • On completion of the initial site review and at the end of each audit cycle, the company must prepare a public report. • Should detail the environmental performance including success of meeting targets and setting of new targets. • Must be concise, comprehensible and accessible to the public.
Validation	All of the above are subject to external verification which will lead to formal validation.

Key components of an EMS using the EMAS framework (Source: Based on Barton and Bruder, 1995).

APPENDIX B

ENVIRONMENTAL INITIATIVES

- Conduct of environmental and social impact studies.
- Minimisation of adverse impacts on Olympic sites and nearby residents.
- Protection of natural environment and threatened ecosystems.
- Enforcement of Environmental Guidelines on suppliers and contractors.
- Concentration of venues in compact zones.
- Placement of all venues and the majority of training venues within thirty minutes' travel from the Olympic village.
- Use of energy efficient design and materials.
- Maximum use of renewable sources of energy.
- Water conservation and recycling.
- Best practice in waste reduction and avoidance.
- Use where practicable of non-toxic substances.
- Use of recyclable packaging and non-disposable cutlery and crockery at food outlets, where possible.
- Use of recycling bins at all Games venues.
- Information transferred electronically where possible to conserve paper, supplemented by paper recycling procedures.
- Public transport being the only means of access by spectators to events at Olympic sites.

Environmental initiatives for the Sydney Olympics from the Environmental Guidelines (Source: Bowdin *et al.*, 2001, p.34-35).



Questionnaire regarding the involvement of Local Authority with Large Events in the context of Environmental Management

Preamble

Large events have the potential to cause significant environmental impact due, primarily, to their size but also as a result of increased waste production, traffic overload, increased energy consumption and the direct impacts associated with large numbers of people visiting a site such as soil compaction and stress on flora and fauna. Large events are, for the purpose of this project, taken to include all one-off events such as county shows, festivals and sports events which attract significant numbers of people (in excess of 5000). An Environmental Management System (EMS) can be described as a process for incorporating environmental issues into the management function of a business or organisation, providing a structured and proactive approach towards environmental issues beyond audit and review.

Objective

To investigate the level of involvement that local government has with regard to large events and the ways in which this is covered in their Environmental Management System (EMS). On completion of this research, a framework EMS for large event management will be compiled to provide guidance to Local Authorities and event organisers and will be made available if requested. All information provided will be treated as confidential. Answers will be aggregated and used to investigate general trends.

SECTION A: Details about the Local Authority

Please indicate your response by placing a / in the applicable bracket(s).

1) Is there a formal Environmental Management System in place in the Local Authority, and if so, for approximately how long has it been in operation?

YES () YearsMonths
 *NO ()

**If the answer to Question 1 is No, please skip to Section B.*

2) Is the Authority's Environmental Management System certified to the Eco-Management and Audit Scheme (EMAS), and if so, for how long has it been certified?

YES () YearsMonths
 NO ()

3) Who is responsible for the development and progress of the EMS?

AN ENVIRONMENTAL TEAM () ENVIRONMENTAL MANAGER ()
 QUALITY MANAGER () OUTSIDE CONSULTANT ()
 HEALTH & SAFETY MANAGER () OTHER (please specify).....

4) What information is currently being communicated to the local community about the EMS?

ENVIRONMENTAL POLICY () ENVIRONMENTAL REVIEW ()
 OBJECTIVES AND TARGETS () PROGRESS REPORTS ()
 CHANGES IN THE EMS () AWARENESS RAISING EVENTS ()
 EMPLOYEE SUGGESTIONS () OTHER (please specify)

5) What communication methods are employed?

- LOCAL NEWSPAPER LEAFLETS
 INTERNET LOCAL FORUMS
 PUBLIC MEETINGS POSTERS
 OTHER (please specify)

6) Please give details of any formal application of the EMS to large events and any involvement with event organisers to advise and assist in the management of their environmental impacts (e.g. documented guidance for environmental management of large events, liaison with event organisers both pre and post event etc).

SECTION B: Interaction of the Local Authority and the Event Organisers

7) Who is responsible for the management of environmental impacts associated with large events?

- EVENT ORGANISERS LANDOWNERS
 LOCAL AUTHORITY OTHER (please specify)

8) The potential environmental impacts associated with large events may be highly significant if information on the event and the receiving environment are not accurate. Please indicate what sort of information is gathered when considering the granting of Public Entertainment Licenses (PEL) for large events and any examples of good or bad practice when considering previous applications.

9) Please indicate numerically, using the scale below, how significant (environmentally) you perceive the potential short-term and long-term impacts associated with the different aspects listed. Short-term is defined as the immediate period during and after the event for two weeks and long-term is any time after this.

- Scale: 1 = No Impact
 2 = Insignificant
 3 = Significant
 4 = Highly Significant

	SHORT-TERM	LONG-TERM
Traffic		
Waste Production		
Energy Consumption		
Soil Compaction		
Stress on Flora and Fauna		

10) In what ways does the Local Authority currently help to reduce the environmental impacts that may arise from large events (e.g. advice, assistance, regulation, audit, training, monitoring, etc)?

11) In what ways could the Local Authority help to reduce the environmental impacts that may arise from large events in the future?

12) If you have any further comments regarding this subject matter please place them here?

Q) Please tick here if you have *no objection* to being quoted in any reports from this research

If you have *no objection*, please provide name:

Name:

Q) Would you be willing to take part in the next phase of this research (a short telephone interview, max 15 minutes)?

YES NO

If you answered YES, please provide name and telephone contact:

Name:

Tel:

Q) Would you like a copy of the framework Environmental Management System for application to large events?

YES NO

If you answered YES, please provide your name and email address (documents will be sent in MS Word 2000 format):

Name:

Email:

Please use the envelope provided to return this questionnaire to this address no later than the 1st of July 2003:

Mike Harris c/o Jon Gurr EIA Resource Centre School of Environmental Science UEA, Norwich, NR4 7TJ
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Thank you for taking the time to contribute to this research

**Public Events Recycling – A guide for event organisers
By Leicester City Council**

10 point action plan:

1. Nominate a person with overall responsibility for the waste management and recycling at the event. They should, ideally have budgetary control and oversight of all services required at an event, thus ensuring that recycling is not conceived in isolation and that services are provided as planned and requested.
2. Assess all waste collection and disposal needs considering the recyclable materials likely to be generated (e.g. cans, paper, glass etc). Should consider the potential number of people in attendance and subsequent waste and recyclable materials that may be generated. Should also consider the impacts of other activities such as catering and stall holders. It may be preferable to include separation and removal of recyclables as part of the litter collection service, this should be investigated.
3. Assign a proportion of the waste budget for recycling.
4. Decide on how materials will be collected and provide on site recycling containers to contain materials generated.
5. Find contractor(s) to collect recyclable materials (this may be the same contractor undertaking waste collection and litter picking).
6. Include recycling information in pre-event publicity.
7. Provide clearly defined recycling point(s) at the event location. Ensure recycling points are chosen using criteria such as: ease of access to the public and the contractor collecting; on solid ground so access is easy in bad weather; and in close proximity to facilities producing waste such as catering areas.
8. Ensure that waste collection and recycling points are regularly serviced, thus maintaining their usability throughout the event.
9. Use large signs to direct event goers to the recycling facilities.
10. At the conclusion of proceedings it may be useful to record the weight of materials collected to assess the success of the event and help in planning future events.

Public Events Recycling. (Source: Leicester City Council (2002))

APPENDIX E

Key Environmental Management Categories

Conservation of biodiversity, landscape and cultural heritage

What is the state of the site?

Are there any geographical, physical or biological issues of relevance?

Pollution management

What are the pollution sources on site?

How is the site managed? (are there any existing measures).

Has there been a risk assessment completed in conjunction with the Environment Agency and the Local Authority identifying issues and management options?

Are there any community or wildlife issues with regard to noise, vibration and light?

What procedures are/should/could be in place?

What are the environmental implications of releases of hazardous materials on site?

Waste management

Where and what are the waste discharges and their quantities?

Where is most of the paper/packaging used?

What opportunities are there to reduce, re-use, or recycling the materials used?

Water resource management

How much water is used and what is the cost?

How and where is the water used?

What are the discharge costs?

Could water be re-used and where could consumption be reduced?

Energy efficiency

What is the type of energy used and its quantity?

What is it used for?

Are there any existing management controls in place?

Does purchasing and maintenance include energy issues?

What opportunities exist for energy savings?

Materials and Purchasing

What materials are purchased and where do they come from?

Do suppliers use environmental criteria?

What options are there for purchasing 'green' products?

Sample questions to ask when completing the initial environmental review

Key Environmental Management Categories

Conservation of biodiversity, landscape and cultural heritage

Must aim to protect areas of conservation importance and to minimise or avoid disturbance to flora and fauna by:

- Surveying site and surrounding area.
- Ensuring sensitive areas are protected from disturbance.
- Ensuring all staff and visitors are aware of restricted areas.
- Consultation with Local Authority and interest groups (e.g. Royal Society for the Protection of Birds).
- Ensure that the site is returned to its original state post-event.

Pollution management

Primary source is likely to be from increased traffic flow but there are also potential risks of spillage of hazardous substances used at event (e.g. fuels for generators) and the effect of noise and light pollution. Some measures to take include:

- Liaison with transport companies to develop a public transport scheme that is good value and efficient. Park and ride schemes are an effective way to reduce congestion close to the venue. Promotion is the key to success. Added benefits may include reduced entry fee for public transport users.
- Use of electric buggies at event site can reduce pollution and soil damage.
- Identify and publicise cycle routes and provide safe bike stores.
- Identify all potential spillages and design mitigation measures. Clean up kits may be adequate but consideration of alternatives should be carried out.
- Identify potential receptors for pollution and maintain distance and take adequate steps to reduce risks. Slope and drainage patterns should be assessed.
- Secure containment of hazardous products and proper use and disposal of them in the most environmental manner. Chemical stock registers should be kept during entire event life cycle.
- Noise and lighting considerations should be made for local residents and wildlife.
- Reduce vehicle movements on and around site. Consider the large vehicles that are using the site and attempt to reduce the numbers. Ensure all large vehicles using the site are necessary.

Materials and Purchasing

This should be part of the environmental ethic that underpins decisions. When considering all aspects from office stationary to types of vehicle being used. Using green strategies for purchasing can become a significant selling point for sponsors.

Key environmental management categories (Source: Adapted from UCI (1999) and UK Sport (1999))

Key Environmental Management Categories

Waste management

Should aim to reduce waste at source as this will not only benefit the environment but also reduce costs for clear up and disposal. It is essential to work with suppliers and contractors to maximise the use of the most recyclable products and packaging. Other measures include:

- Establish a waste management strategy incorporating reduce, re-use and recycle ethic.
- Review then necessity for certain products and materials and their quantities.
- Try to bulk buy products for whole event.
- Use electronic sources for communication and storage of information where possible and where paper is used ensure recycling facilities are provided.
- Identify major waste streams and provide separate bins in most appropriate areas.
- Provide bins for different materials rather than isolated bins that attract all rubbish, unless waste separation is planned.
- Ensure adequate signposting of recycling facilities.
- Regular bin maintenance to ensure that bins do not overflow and that signposting is clear.
- Communicate the waste strategy to all staff, contractors and to a certain extent the visitors so that facilities provided are used to their full extent.

Water resource management

Major events create surges in demand for water for toilets, catering and cleaning. There are a range of more expensive water conservation methods such as automatic taps and timers but some simple measures are listed below:

- Ensure pipes and equipment are free from leaks by carrying out regular checks.
- Put signs near water sources requesting user to 'use water wisely'.
- Educate staff and contractors about water conservation.

Energy efficiency

The potential cost savings from reducing energy use can be very significant. Steps to become more energy efficient may include:

- Ensure light bulbs are low energy long life. This will reduce waste bulbs also.
- If possible, put timers on switches.
- Ensure staff and contractors are trained and educated to ensure energy efficient approach to all operations.
- Use alternative sources where possible.
- In the long term it may be advantageous to complete an energy audit.

Key environmental management categories (Source: Adapted from UCI (1999) and UK Sport (1999))