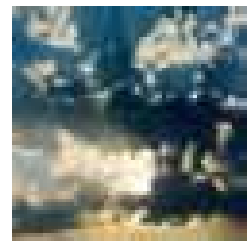


*'Tomorrow's Company',  
a study by the Royal  
Society of Arts,  
concluded that the  
company of the future  
will be 'inclusive',  
one that forms deeper  
relationships with its key  
stakeholders as a means  
of achieving financial  
success.*

## *Environmental management*

Public environmental perception is growing, lessening the acceptance of environmental damage. The public can put pressure on organisations directly and has lobbied governments to push improvement at a legislative level. For many organisations achieving regulatory compliance is the most important driver for improved environmental performance - for example, pressure to comply with legislation such as the Pollution Prevention and Control (PPC), Control of Major Accident Hazards (COMAH) and Contaminated Land Regulations. Significant emphasis is now placed on environmental management systems (EMS) under the new PPC regime in the UK.

There are also many other 'influences' such as the often forgotten external stakeholders who may have very different views on what should be done to those working internally.



## *Capability statement*

# Entec

*Entec is one of the UK's largest environmental and engineering consultancies. Our technical and business skills are dedicated to delivering strategic, technical and engineering solutions which bring commercial benefit to customers at home and overseas. This know-how is based on over 60 years' consulting experience in the public and private sectors.*



Certificate No. EMS 69090

Certificate No. FS13881

Entec operates a Quality Management System in accordance with the latest requirements of the international standard BS EN ISO 9001 and an Environmental Management System compliant with BS EN ISO 14001. Both are audited by BSI Management Systems.



## *The move towards integrated management systems (IMS)*

Organisations use management systems to control particular activities or to implement specific policies. Such systems can encompass:

- Business management (finance, human resources, marketing and project management)
- Quality management – QMS (ISO 9001)
- Environmental management – EMS (ISO 14001)
- Occupational health & safety management – SMS (OHSAS 18001)

These systems are often discrete, operate to their own procedures and standards and are subject to separate auditing regimes.

SMS (OHSAS 18001) is derived from ISO 14001 and is nearly identical in structure, sharing its 'Plan – Do – Check – Act' principles. Moreover, since the publication of the revised QMS ISO 9001:2000, all three standards share similar structures, being developed from the viewpoint of process management and sharing the common threads of compliance, prevention and continual improvement.

Multiple management systems are inefficient, particularly when there is duplication or conflicts. In order to satisfy expectations and increase efficiency, organisations are looking to combine management systems under a single 'umbrella' or framework where all the common elements are shared.

Management system standards are generally evolving towards integration. A standard is currently under development, under the guise of the 'Sigma Project', run by the Government and other interested parties, including certification bodies such as BSI.



## *Entec's approach*

### *Overall aims*

Entec's support can be summarised as:

- providing an approach that meets your business needs and fits in with business planning systems and timeframes;
- assisting you to address your key environmental concerns in a manner that affords opportunities for quick wins and competitive advantage where possible;
- aiding you to develop methods and tools that are practical, useable and will provide better control of environmental performance without unnecessary burdens;
- working with you to use and develop existing systems and procedures - not create new ones; and
- helping you to avoid the pitfalls during the EMS implementation process.

### *Where to start*

The EMS development and implementation process can be split into three phases:

Phase I:

***Establishing the business case for an EMS***

Phase II:

***Developing and implementing the EMS***

Phase III:

***Achieving certification (if desired)***



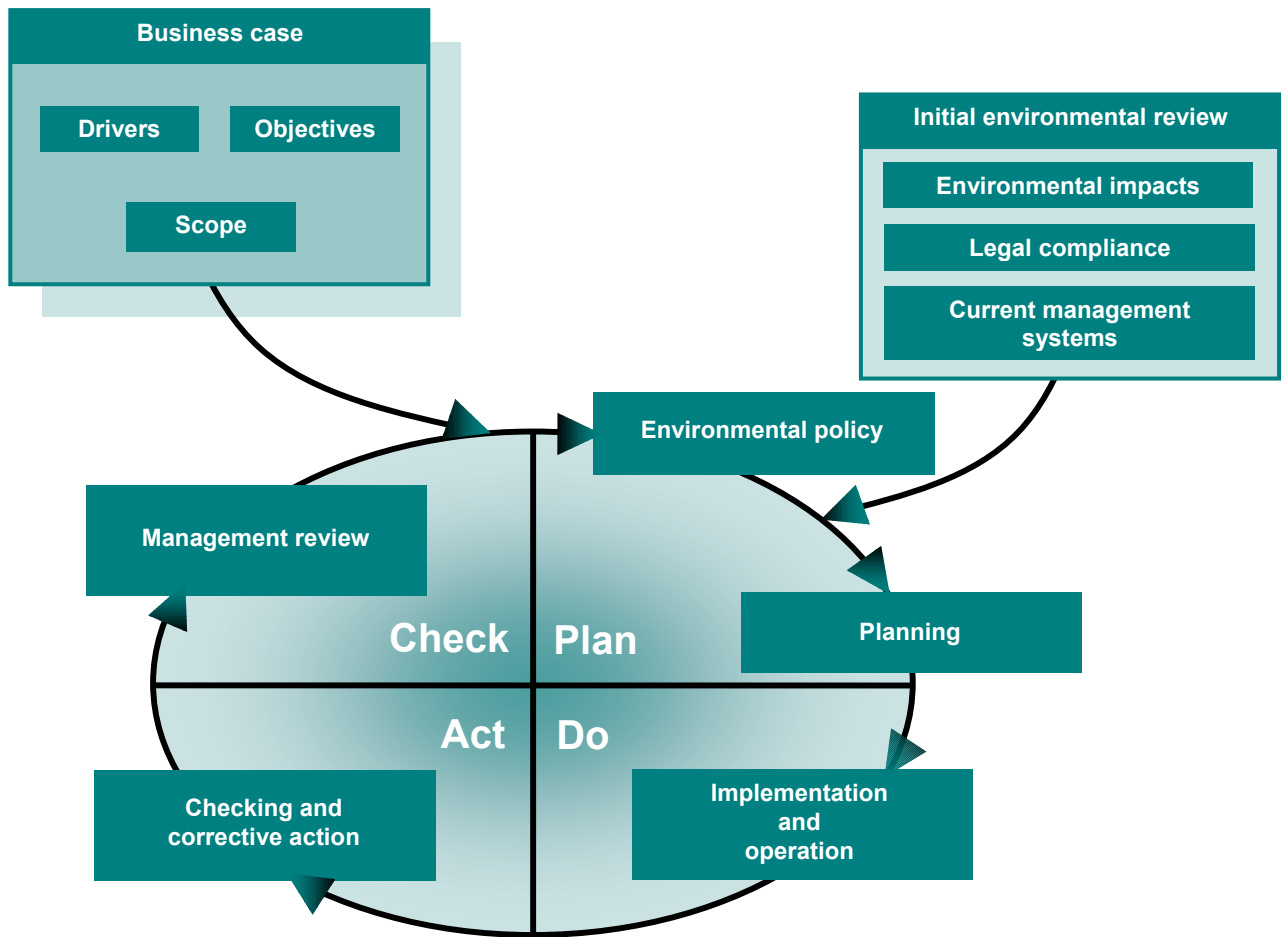
# *Establishing the business case of the EMS*

Entec can put forward a focused business case to explain why an EMS is needed and what it can do. It is important to sell the EMS and win 'buy-in' by senior management, who must understand the benefits and the resource implications.

The business case is a combination of three issues:

1. Drivers:  
*Why do you need an EMS ?*
2. Objectives:  
*What do you want it to do ?*
3. Scope:  
*What is the EMS managing ?*

Understanding these is vital if the EMS is going to be a success for the long-term.



*The ISO 14001 'improvement loop' incorporating the business case and the initial environmental review*



# Environmental management



## Drivers

Drivers for improved environmental performance can include the following:

### Internal drivers

- Senior management commitment
- Cost savings and improved efficiency (the double dividend)
- Risk and impact control
- Staff involvement and satisfaction

### External drivers

- Legislation.
- Green taxation.
- Corporate governance and disclosure.
- Pressure from share-holders, lenders and insurers.
- Supply chain pressure (suppliers and customers).
- Competitor / peer activity.

## Objectives

Setting objectives for the EMS enables you critically to review whether it has delivered and where potential for improvement still remains.

- Assurance of improved accountability for customers and other stakeholders.
- Improved public/community relations.
- Improved investor confidence.
- Enhanced image and market share.
- Ability to meet vendor certification criteria.
- Improved efficiency and cost control.
- Reduced risk of incidents that result in liability.
- Ability to demonstrate reasonable care.
- Improved industry -government relations.

Having identified the drivers, scope and objectives, Entec can present the business case using a format that is understood by and appropriate to decision makers.

- Project description.
- Project rationale.
- Benefits and risks.
- Concerns addressed.
- Project objectives.
- Project scope.
- Feasibility work.

## Scope

Understanding and setting the scope of the EMS is vital. It is essential that the EMS does not attempt to manage issues that you cannot control.





## *Environmental management*

### *Reasons to go for certification*

Many organisations can be undecided whether they should go for formal certification. However, a review of the 'drivers' is useful guidance.

Formal certification to a standard may be needed in order to protect existing and develop future business. Benchmarking other organisations may provide a driver for certification. The high uptake of ISO 14001 by companies in the Far East may be a driver for UK companies wanting to compete in the same markets.

### *The choice of certification body*

Costs vary, but are based on the number of employees, the number of sites and the complexity of the EMS. It is recommended that a number of certifiers be invited to tender, so that costs and approaches can be compared. It is worth bearing in mind that you will be forming a long-term relationship, so the issue of added value should be considered.

## *Achieving certification*



## *Entec's supporting capabilities*

### ***Complementary environmental management services***

In addition to the development and implementation of environmental management systems, Entec's EHS Group also has complementary expertise in:

- Training - Entec has four basic courses: General Environmental Awareness, Senior Management Awareness, Specific Environmental Topics Training, and Internal Auditor training (including a 3-day IEMA-accredited Internal EMS Auditor course).
- Environmental Auditing - including compliance auditing and due diligence auditing.
- Integrated Management Systems (IMS) - Development and implementation of safety management systems and the integration of management systems.
- Environmental and Sustainability Reporting - compilation, review or verification of environmental reports.

At the initial review stage of EMS development, environmental issues may be identified that need further expert advice and solutions. Entec can also offer the following services:

#### **Corporate risk management**

- Safety and risk management, including COMAH safety case preparation and risk modelling.
- Environmental economics (cost of compliance) advice, including Climate Change Levy burden calculations.

#### **Contaminated land**

- Site condition reports (e.g. for sites authorised under PPC).

#### **Planning issues**

- Environmental impact assessments.
- Planning assistance.
- Pollution modelling.

#### **Engineering solutions**

- Engineering design, build and/or operate capabilities.
- Clean production, waste and utility minimisation studies.

### ***Management system software***

Entec is the accredited training organisation for Entropy International, a leading and international supplier of web and intranet-enabled software, for integrated environmental, health and safety and quality management systems, certifiable to ISO 14001, ISO 9001 and OHSAS 18001. This software is trademarked under the name Envoy™ and provides for a single framework HSEQ management system, suitable for use by both single and multiple site organisations.

Four of the most obvious benefits of an intranet or web-based management system are:

1. Improved management practices and consistency.
2. Improved knowledge sharing and retention.
3. Time savings.
4. Cost savings.

## *Case studies*

*The following pages demonstrate Entec's capabilities in the area of environmental management, using case study examples. ►*



## **Development of an Environmental Management System for the Upgrade of the East Coast Main Line Project Management Team (ProMT), Railtrack**

Environmental considerations are a key part of the programme for the upgrade of the East Coast Main Line (ECML) and the Railtrack Project Management Team (ProMT) is committed to the development of an environmental management system (EMS) to manage the impacts associated with the programme. The programme is planned to cover 70 work schemes between Kings Cross and Edinburgh Waverley and includes a number of Transport and Works Orders which require approval from the Secretary of State. With this complex and long-term work programme it was considered important to establish an EMS early in the process to gain 'buy-in' from all the parties involved and establish firm procedures.

Given the scale of the project, a pragmatic view has been taken of the requirements to be included within the scope of the EMS



and the corresponding inputs from various parties. A key part of the work is the identification and evaluation of significant environmental aspects associated with the ECML programme and how these would be applied to the work schemes as they are developed. Associated with this, Entec is to provide comment on the existing Railtrack register of legislation and its applicability to major projects and the relevance of objectives and targets for the forthcoming year. Work also includes drafting the basis for future procedures for EMS documentation which are, as far as possible, consistent with existing systems, but focusing on the particular requirements of major projects to ensure they are appropriate to the scale and type of activities undertaken.

Entec is working to ensure the outputs provided are in line with the requirements of the overall ECML programme, and addressing critical risks and environmental issues and linking these with other parts of the upgrade process.

*EMS expertise  
for major rail  
infrastructure  
improvements*



## **EMS Framework Agreement** Environment Agency and DEFRA

*Five-year framework  
agreement for EMS  
support*



Following a competitive bid involving 120 consultants, Entec was appointed onto a five-year framework agreement jointly managed by the Environment Agency and DEFRA in April 1999. This framework is to support the implementation of environmental management systems (EMS), certified to ISO 14001, across Government departments and agencies.

Entec's services can be commissioned without the need for extensive contract negotiations and documentation, as the Government's requirements for competitive tendering and best value criteria have already been met.

This has enabled Entec to provide a range of environmental management services, from establishing the business case for EMS, through to full EMS implementation, training and post-implementation review of the benefits of the system.

During the first two years of the framework, Entec has worked with nine Government departments as well as regional development agencies, Government offices, NHS trusts and emergency services.



## **'ECO-ordinated' - The SMEs and the Environment Programme** The Birmingham Centre for Manufacturing



Photo provided  
courtesy of Anopol Ltd



Photo provided courtesy of Stanley Smith Wire

### *Birmingham SMEs profit from environmental management and waste minimisation*

The Birmingham Centre for Manufacturing (BCM) is dedicated to the support and world class development of midlands-based manufacturers. It is a partnership between the Birmingham Training and Enterprise Council, Birmingham City Council and the University of Central England. In 1999 BCM won funding from the EC and Birmingham City Council to run a two-year programme of subsidised environmental support for small and medium-sized enterprises (SMEs) in Birmingham. Thus was born 'ECO-ordinated' - The SMEs and the Environment Programme.

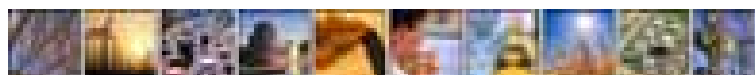
Impressed by Entec's expertise both in waste minimisation and environmental management systems consultancy, BCM chose Entec to deliver the ECO-ordinated programme, beginning in 2000. The objectives of the programme for the participating SMEs are two-fold:

- to develop an environmental management system (EMS); and
- to achieve waste minimisation and energy efficiency savings.

The goal of the EMS part of the programme is for the companies either to reach certification to ISO 14001 or to install an EMS that enables them to comply with legislation and achieve continual improvement in their environmental performance. Entec works with the participants to develop an EMS that fits their company structure and culture. Through the waste minimisation part of the programme Entec trains and leads the companies to identify, quantify and realise cost saving opportunities. Essential for both elements of the programme is helping the SMEs to set up procedures, monitoring systems and management structures. Entec delivers the programme through a series of alternating training workshops and individual

consultancy visits. This approach provides motivation and technical help, both to encourage and enable the participants to take action.

The companies are all well on course for achieving the installation of their EMS by the end of the programme. They have already achieved savings through waste minimisation and have identified 5-10 projects each that they are developing to yield future savings.



## Initial Environmental Review for Metro Operations Nexus

Metro Operations in Tyne and Wear runs the largest light rail system in the UK. The Metro is being extended to Sunderland and will operate along the Railtrack network which means for the first time it will be subject to the requirements of the Rail Regulator which includes the need for an operating licence. The licence application requires that a number of environmental issues are addressed.

The requirement for the environmental information was used as an opportunity for the organisation to review its existing environmental performance and Entec was commissioned to assist and focus this task. An initial environmental review was undertaken which drew together the environmental aspects of the operations of the Metro which were examined in relation to legal compliance, best practice actions and also included a review of the existing management practices and procedures in place for environmental issues. Entec's experience with the rail sector was important with this process and assisted with a series of prioritised recommendations which were produced for the organisation. Based on this

information, Entec was able to develop the necessary items as required by the Rail Regulator. This included the development of an environmental policy, objectives and targets for the organisation, written management arrangements and monitoring requirements.

The work undertaken by Entec resulted in Metro being in a position to submit the environmental components of the Sunderland extension ahead of the required date, building confidence with the Rail Regulator for the whole project. The process also provided the organisation with an established baseline of current environmental performance and a sound base from which to move toward to an established environmental management system - one of their long term goals.

*Meeting the  
environmental  
requirements of  
the Rail Regulator*



## **Environmental Management System (EMS) Development** Building and Estates Management Division, DEFRA

The Building and Estates Management Division (BEMD) of DEFRA, is seeking to progress the development of an environmental management system (EMS) for aspects of its operation. This will strengthen the implementation of the Department's own Greening Operations Strategy and secure an approach consistent with the Government's recommendation regarding the uptake of EMS.

In consequence, BEMD commissioned Entec under a framework agreement to assist in the development of the EMS at its four HQ sites, located in central London. The first stage of the EMS development required the completion of an initial environmental review of the selected sites.

The project objectives included:

- assessing the existing environmental aspects, environmental management practices and legal compliance of BEMD activities within the London HQ estate;
- providing a gap analysis of existing BEMD environmental management practices and procedures against the requirements of the ISO 14001 EMS specification to identify where modifications and additional procedures could be required; and
- providing an action plan to aid environmental performance improvement.

The review included identifying existing environmental procedures and practices, identifying opportunities for improvement of existing environmental performance, and identifying the next steps to assist BEMD progress its EMS development towards formal certification against the ISO 14001 standard.

The completion of the initial environmental review provided a coherent framework for BEMD to identify and manage all its significant environmental impacts. This has then been furthered by the completion of an appropriate environmental management programme, an EMS manual and procedures and environmental training. Using Entec support, DEFRA is seeking certification of its system to ISO 14001 in 2002.

The certified EMS will assist BEMD (and DEFRA) to demonstrate effective environmental management consistent with the EMS expectations of the Government from its own estate.



*Environmental  
management at the  
heart of Government*





## *Environmental Management*

### *Sample client list*

Akzo Nobel  
Alvis  
B Sky B  
Bellway  
Cable & Wireless  
Cadbury Schweppes  
Calor Gas  
Dana Spicer  
Department of Transport, Local Government and the Regions  
Environment and Heritage Service, Northern Ireland  
Eurorail  
Foreign and Commonwealth Office  
Forestry Commission  
Government office for the North East  
Health & Safety Executive  
Highways Agency  
HM Treasury  
HM Customs and Excise  
Home Office  
Honda  
Inland Revenue  
National Grid  
Nexus Metro Operations  
One Northeast  
Railtrack  
South East England Development Agency  
Shotton Paper  
Yorkshire Forward



# **Entec**

*For further details on  
Entec's full range of environmental and engineering services:*

***Telephone***

0800 371733 (UK)  
+44 (0) 191 272 6100 (Overseas)

***Fax***

0191 272 6592 (UK)  
+44 (0) 191 272 6592 (Overseas)

***E-mail***

[info@entecuk.co.uk](mailto:info@entecuk.co.uk)

***Web site***

[www.entecuk.com](http://www.entecuk.com)

