

# The BS 8555 SME Workbook

## Phase 1: Commitment and Establishing the Baseline



**iema**  
Institute of Environmental  
Management & Assessment



**Biffa**ward  
investing in the environment

supported with funding from the European Commission LIFE funding programme and Biffaward.

## **ACKNOWLEDGEMENT**

*Extracts reproduced with the permission of the British Standards Institution under licence number 2003SK/051. BSI publications can be obtained from BSI Customer Services, 389 Chiswick High Road, London W4 4AL. United Kingdom. (Tel + 44 (0) 20 8996 9001). Email : [cservices@bsi-global.com](mailto:cservices@bsi-global.com)*

*All the template documents included in this publication are adapted from work originally published in 'ISO14031 a practical guide...' Wathey and O'Reilly, 2000). The IEMA would like to thank the authors for their permission to draw on the material.*

## Introduction

### Welcome to the BS 8555 SME Workbook: Phase 1.

This publication provides a user-friendly companion document for SMEs wishing to make a start on the road towards an Environmental Management System (EMS) by using the implementation process outlined in the British Standard BS 8555 *Environmental management systems — Guide to the phased implementation of an environmental management system including the use of environmental performance*.

BS 8555 breaks down the implementation of an EMS into 5 discrete phases. The 6<sup>th</sup> phase prepares you either for accredited certification to ISO 14001 or registration to the EU's Eco-Management and Audit Scheme. The Phases of BS 8555 are:

- Phase 1 Commitment and Establishing the Baseline
- Phase 2 Identifying and Ensuring Compliance with Legal and Other Requirements
- Phase 3 Developing Objectives, Targets and Programmes
- Phase 4 Implementation and Operation of the Environmental Management System
- Phase 5 Checking, Audit and Review
- Phase 6 Environmental Management System Acknowledgement

This practical workbook has been designed to introduce Phase 1 of BS 8555, passing on practical guidance to help you get your EMS off the ground. Planning your EMS implementation is made easy and straightforward, simply follow the SME Workbook Stages to lay the foundations of a meaningful EMS. This way you can take the first steps towards:

- increasing the efficiency and effectiveness of your business
- understanding and managing your environmental impacts
- getting recognition for customers of your environmental credentials
- achieving the international standard ISO 14001
- registering for the EU Eco Management and Audit Scheme (EMAS)

Where references are made to external sources of help within the workbook, readers outside the UK should be aware that similar sources may exist within their own countries. This workbook has been written in a UK context, however, this should not deter international readers from using it.

### The structure of the workbook

BS 8555 and this workbook, breaks EMS implementation down into a series of defined, manageable Phases, which can be tackled incrementally through to eventual ISO 14001 certification. There are five of these individual Phases, with an optional sixth Phase offering the chance to progress to EMAS registration. Each Phase is sub-divided into a series of Stages, and each Stage is sub-divided into a range of tasks for completion. This three-tier approach breaks the implementation down into an easy to use, step-by-step methodology, which is ideal for SMEs with limited resources.

This practical workbook supports the seven Stages within Phase 1 of BS 8555, describing why and how you should address the requirements. A series of *Top Tips* have been included, along with *Case Studies* to give a practical insight, describing how companies who have successfully used BS 8555 have interpreted the requirements. Each Stage contains signposts to further *Reference Material* detailing environmental best practice case studies available from external sources.

Each Stage defines its own *Achievement Criteria*, a set of requirements used by 3<sup>rd</sup> party auditors to assess effective EMS implementation, therefore, all the implementation effort is directed to support these criteria. There is also some guidance alongside each *Achievement Criteria*, to provide examples of typical outputs that would satisfy the requirement.

## **A word about the language of BS 8555**

Though BS 8555 was written specifically with small and medium sized enterprises in mind, the language of a British Standard can sometimes come across as though it is written for lawyers, technicians and those who are fluent in management jargon. Often, because a standard may be quoted in law and can become a legal document in itself, the struggle for precision overwhelms clarity of expression, and the result means that most readers have to struggle with individual sentences.

Part of the reason for such language use is that BS 8555 is designed as a step by step process for those who may wish to take an EMS to the stage where they can achieve certification to ISO 14001 or registration under the EU Eco Management and Audit Scheme. This means that some of the terms are already laid down in these documents, which in turn sets limits on how wording is applied even in the early stages of EMS implementation. A lot of effort to understand now will certainly pay off in later months. On top of that, much of BS 8555 may not translate well into the surroundings and circumstances of smaller companies, where management roles are (and often need to be) far more flexible and less formal than larger organisations.

This workbook encourages everyone, no matter what size their company to be creative in the way that they go about following the guidance. In order to do this, we have attempted to explain the purpose behind each of the pieces of information in BS 8555 on the basis that once the purpose is understood, how things are designed on the ground is up to the individual, and the company they work in. Bear in mind, however, that you'll need to educate not just the people you work with but those who come in to examine how you carry out your operations (should you choose to).

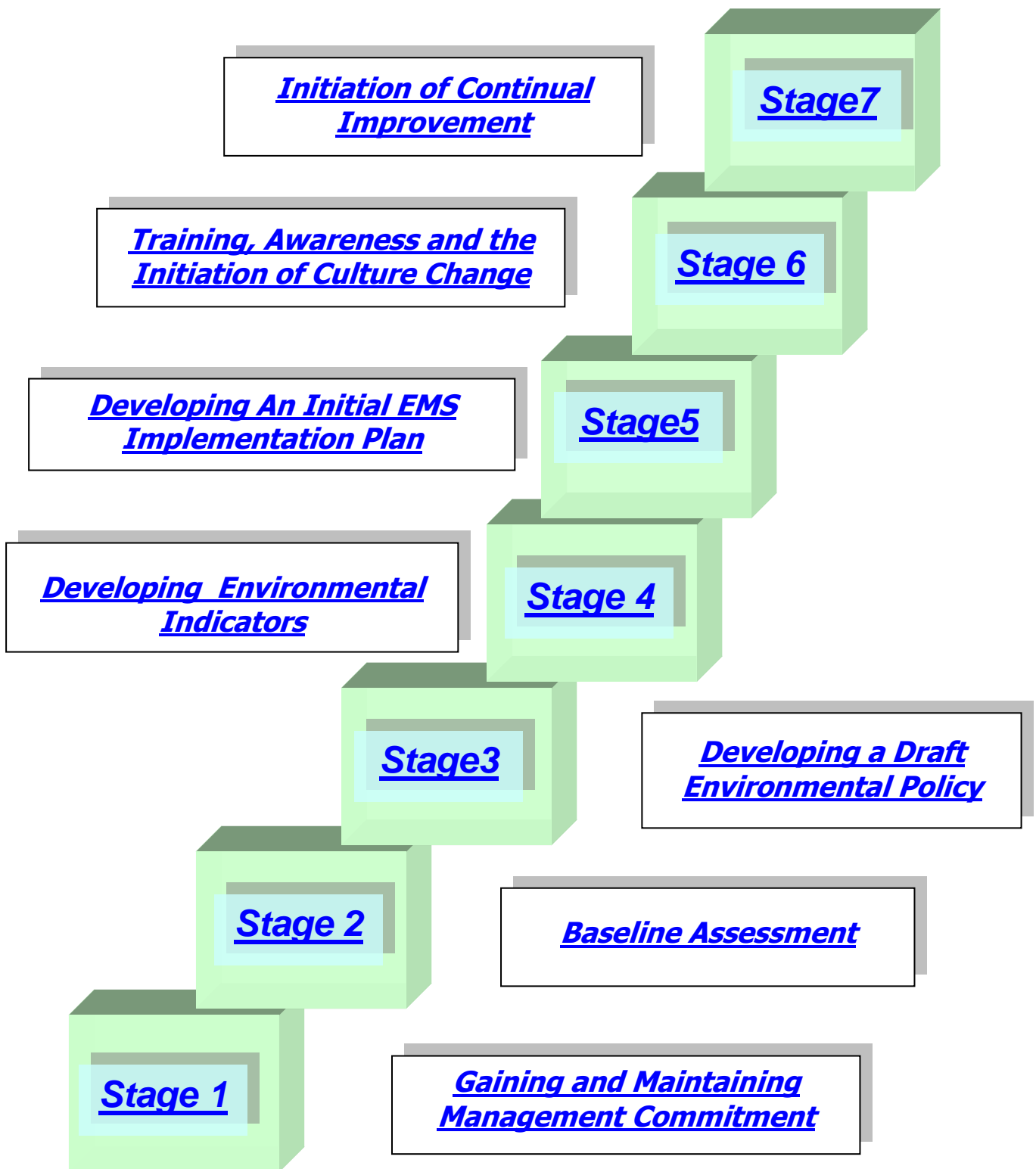
To take a case in point, BS 8555 uses the word 'robust' in front of the word 'evidence' at the end of each of the Stages. This is in the section marked 'Achievement Criteria' which organisations use to find out if they have completed one Stage before moving on to another. Here, 'robust' means that the evidence that something has been completed isn't just circumstantial – it has to be available and obvious to everyone that something has been done and is capable of continuing in the same way.

Whatever you may hear to the contrary, this doesn't always mean a document. On the other hand, everyone has to be satisfied that the stage is complete so some kind of physical evidence or observable practice that you can point to is always a good idea. The smaller the company, the less likely documents are going to be the only type of evidence. If you're a two-man band, documents in a management system can be kept to a minimum without a loss of performance. The success of your system won't be judged on the amount of paper you produce, but on the level of environmental performance you're able to achieve.

If this workbook seems a little overwhelming at first, don't worry. You don't have to do it all at once. That's the whole idea of a step-by-step process; you can stroll through at a leisurely pace or sprint if you've a mind to. Either way, you're the one in control of the speed of implementation.

Finally, you'll find more information and support available through the Acorn website <http://www.iema.net/index.php/acorn> which also has some useful online tools that could speed up the process even more.

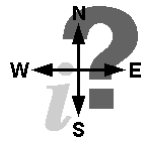
# ***BS 8555 SME Workbook: Phase 1 Stages***



# GAINING AND MAINTAINING MANAGEMENT COMMITMENT

## Why

- Getting and maintaining management commitment, even if you are a very small company, is essential for the successful implementation of any management system.
- Because nothing ever runs smoothly, commitment will be needed to give the EMS status on a par with other business decisions within the organisation, so that changes are made and resources allocated even when things get difficult.
- Even in a two-person partnership, everyone needs a consistent approach to the EMS, hence 'commitment'.
- Don't just think about managers - devolved responsibilities will help to maximise the benefits of the EMS, by involving people at all Phases in understanding and identifying opportunities to drive the EMS forward.
- A common approach is to create an implementation team, which requires time and effort from key members of staff - this will be impossible to achieve without everyone's commitment.



## How

- Canvass opinion - identify the reasons why your company wants to implement an EMS through short brainstorming sessions with key personnel, discussing potential opportunities and barriers.
- If you have to, present the case for a staged approach to an EMS to senior management, highlighting the advantages of improved environmental performance for your company. This could be in the form of a short presentation delivered at one of their regular management meetings.
- Establish a representative, cross-departmental implementation team to drive the EMS throughout installation. Even smaller organisations may need some element of formality here to get things done.
- At this early stage, begin to outline the roles of all parties involved in EMS implementation, particularly those of senior management and the implementation team. Work with the team to draft a management structure and associated roles within the EMS implementation – put it down on paper or on screen.
- Once 'management commitment' has been secured, whatever it looks like within your organisation, keep the momentum up by making sure everyone appreciates the benefits and successes that come about during the EMS implementation. Everyone using the EMS will appreciate a clear and concise summary, with short headlines of successes; use language and terms that everyone can grasp without a struggle.



# TEKDATA

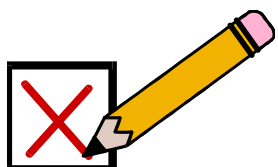
## Case Study

Tekdata Ltd successfully implemented an EMS meeting ISO14001 requirements using an early version of the BS 8555 SME Workbook. Having secured senior management commitment, an EMS Representative (someone who was given the responsibility of installing and maintaining the EMS in addition to their other duties) established an implementation team with members of staff from a range of departments and levels within the Company. These included departmental managers, team leaders, the site electrician, and other operatives. Throughout each stage of the EMS implementation, this 'Green Team' were trained and then tasked with carrying out actions to support the implementation in their individual departments. For example, identifying environmental impacts from their department, understanding applicable legislation, and developing appropriate operational controls. This implementation approach allowed departments and individuals to shape their own management systems, giving them direct influence over their environmental performance. This approach can work well even if you are in a very small organisation with a series of one person departments.

# GAINING AND MAINTAINING MANAGEMENT COMMITMENT

## BS 8555 Achievement Criteria

Robust evidence that top management commitment has been secured.



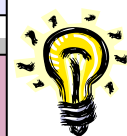
Robust evidence that a draft outline of the environmental management structure and responsibilities has been developed.

## Practical Examples

- Nomination of a management representative for the EMS (this could be different from the EMS Representative (see Tekdata above).
- Establishment of an EMS implementation team.
- Allocation of EMS budget lines.
- Regular communications to senior management in place and active (e.g. meeting minutes, weekly or monthly reports).
- Environmental Policy endorsed (see [Stage 3](#)).
- Management involvement in implementation process or initiatives.

- An organogram outlining the structure of all parties involved in EMS implementation.
- Draft roles and responsibilities identified for key players involved in EMS implementation, i.e. EMS Representative, senior management, Implementation Team.

## Top Tips



- Use the team to identify the key business drivers for undertaking the project, as well as the benefits, strengths, and potential barriers to implementation.
- If you make one, your presentation to management should include data to back up your statements i.e. list of customers asking you for EMS credentials, number of competitors certified to ISO 14001, annual costs of waste disposal, electricity use, and water consumption.
- Prepare a short summary of your EMS implementation plan for senior management that supports the business drivers that apply to your company like those identified above. Remember to keep this concise, (try one page of big print) as a weighty document may be off-putting and overlooked.
- It is easier to push at open doors. If you can, approach a manager who may be willing to champion environmental issues. Seize opportunities to gain momentum.
- Break down tasks into manageable chunks. This is where the BS 8555 SME Workbook will help.
- Review progress and report successes regularly throughout your organisation.

## References

- Envirowise publications (available free from <http://www.envirowise.gov.uk/envirowisev3.nsf>)**
- 010 - [Environmental Management Systems: Getting Senior Management Commitment](#)
  - 011 - [Environmental Management Systems: Raising Awareness with Teams and Champions](#)
  - GC059 - [Environmental Improvements Reduce Costs](#)
  - GC232 - [Business Benefits of Continual Environmental Improvement](#)
  - CH164- [Self-help Guide Leads to Easy Cost Savings](#)
  - EN330 - [Measuring to Manage: How Reducing Waste can Unlock Increased Profits](#)

### **1.1.1 Gaining Initial Management Commitment.**

Getting (and keeping) management commitment is fundamental to implementing a successful Environmental Management System (EMS). However, getting new initiatives onto the business management agenda may prove to be difficult, even if you are the one writing the agenda. It will be easier if you can understand and demonstrate to others the benefits for your organisation. Start by considering the drivers that could influence your organisation to establish an EMS. These could be:

- **Cost savings** – by focusing on reducing resource consumption and waste outputs, savings can often be realised. *An EMS will help you focus on potential savings, plan programmes, establish controls and monitoring, and work to objectives and targets.*
- **Risk management** – reduce legal, financial, and reputational liabilities. With increasing environmental legislation, backed by increasingly heavy penalties, it is no longer prudent to ignore your legal responsibilities. In addition to the direct costs of non-compliance (fines), and the indirect costs (legal fees, management time), you also have to weigh up the potential damage to your organisation's reputation (lost business – still feeling lucky?). *An EMS will help you identify current and forthcoming legislation and other requirements, as well as establishing controls to help you manage down your risks. In addition, an EMS certified to ISO14001 or EMAS might even reduce the level of scrutiny imposed by enforcement bodies.*
- **Marketing opportunities** – environmental awareness amongst consumers continues to grow, and providing the quality and price are right, opportunities exist for winning new sales and consolidating existing business by promoting the environmental characteristics of your products/services. *An EMS provides the framework for identifying customer requirements, and for establishing eco-design projects or supplier programmes.*
- **Interested Parties** – Internal and external. From employees to the local community, investors to activists, all can have an interest in your activities and influence your success. These interested parties will have different views of what is important in relation to the environment. As such, accommodating these views will be a part of fostering/maintaining good relationships. *An EMS provides a framework for measuring and monitoring environmental performance, and communicating information. Additionally, an externally certified EMS can provide credible evidence of your organisation's commitment to environmental issues.*

Once you have identified the main drivers, think about any opportunities for your organisation. Use case studies and publications from [Envirowise](#) or other similar organisations for some pointers. These guides are free of charge and contain sector-specific guidance, with real case studies outlining savings that other companies have achieved. Enjoy thinking laterally and finding if there is a way in which you can differentiate your product or service environmentally in an otherwise crowded market. EMS is all about adding value to your business.

If you can identify specific benefits for your organisation (especially if inexpensive and easily reachable), getting continued commitment from everyone including management will be easier to achieve. You may not have all the information to hand initially, so be prepared to do some research. Look at your bills and calculate the likely savings for your organisation, based on what has been saved by similar companies. What percentage increase in sales would it take to generate the same amount of savings? Think about waste and the potential for reducing, reusing or recycling. Think about legal or commercial environmental pressures, such as new legislation, taxes, customer questionnaires, or public concern. Investigate what

other organisations in your sector are doing in relation to environmental issues. Are you likely to be leading your field, keeping pace with your competitors or always trying to catch up?

Alternatively you might want to gain just enough commitment so that you can conduct a baseline assessment first (see [Stage 2](#)), and then use these findings as the basis for a further, more detailed, presentation to management.

Identify existing strengths of the organisation or individuals that might support the introduction of an EMS, such as people with environmental qualifications, or existing management systems experience (possibly in quality, or health and safety). Possibly, your organisation already has a good environmental reputation in the market place or local area, and you want to enhance this.

Finally, think about potential barriers to the project. Try to identify how you will overcome these before presenting your case, as ignoring barriers might provide excuses for not supporting the project, or potentially worse still, cause the project to fail in the future.

In preparing your presentation, think about who you are trying to convince and why. Think about what things will make them sit up and take notice (e.g. Managing Director—corporate image, Finance Director—cost savings, Sales Director—marketing opportunities, Operations Director—improved staff morale). Use an appropriate method of communicating with senior management – in small companies this might be quite informal but in others there may be a preferred method. Ensure you have time to clearly present the case, but make sure it is concise. Have further information available, but try and refrain from putting management off with a lengthy report – the one page Executive Summary is always read no matter how large the document, so spend time on making it convincing.

Break your plans for the implementation project down into smaller chunks, so it is clear what needs to be done. This can also provide the option of settling on a reduced programme if commitment for the full project is proving difficult to secure. Building the project around BS 8555 will undoubtedly assist you in this task, as there are six clearly defined Phases, all of which can be externally assessed to make them credible achievements.

Even when top management commitment has been secured, it will still be important to work on securing the commitment of other managers and key personnel. In medium sized and larger organisations, this can prove more difficult, so getting senior management representatives involved in the dissemination of the project plans can be helpful.

### **1.1.2 Maintaining Management Commitment**

Getting initial commitment is one thing, keeping it throughout the project is quite another. Enthusiasm for a project at the proposal stage can soon wane if things don't go to plan, or circumstances change. Get senior management to visibly support the introduction of the EMS, this could be by an address at a staff meeting, or by letter advising all the staff.

Any such commitment needs to lead by example. Remember, if you and your management team are championing this cause, then you need to be seen to be driving the implementation yourselves. Prioritise actions to identify areas for improvement that make a visible difference. Not only can these be established quickly and effectively but they can also visibly demonstrate to everyone that improvements can be made – and nothing keeps on succeeding like early success. Report achievements regularly, as it is important to keep management and staff informed. All too often, new schemes start off with good intentions, but enthusiasm flags if people are not kept up to date and involved in what is happening.

Create a sense of ownership for the scheme and initiatives by involving everyone (and this can sometimes mean contractors where they play a significant role in the organisation). Acknowledge that you need their help to implement the system successfully. Utilising staff suggestions for improved environmental performance will help to gain confidence and to reassure management that this is an initiative worthy of continued support.

Keeping the momentum going for environmental management can be difficult when other activities compete for your attention. Use this workbook to break the necessary work into manageable tasks and try to plan ahead.

### **1.1.3 Establishing the Implementation Team**

For an EMS to be effective, involvement of people at all levels within the organisation is required. The fewer the levels, the easier this is, but even here it's advisable to get as many key individuals as possible involved from the outset. This shares the workload, and helps to spread the commitment already shown by senior management. Creating an implementation team is therefore a logical next step.

The size of the implementation team will depend upon the nature of your organisation, but gaining representation from all key operational areas is advisable. It should not be exclusive to management, but if time away from normal work is required, or major changes have to be implemented, then team members will need the necessary authority to follow these through.

Ultimately the team will need to be manageable, so do not create too large a team that is difficult to co-ordinate and communicate with. If you have large numbers of people, think about establishing sub-groups or task-specific working parties to support the implementation team. Consider existing groups – it is possible that groups will already have been formed for other projects (e.g. under Health and Safety, or Quality Management Systems), which might include the right mix of people with time to take on the EMS implementation.

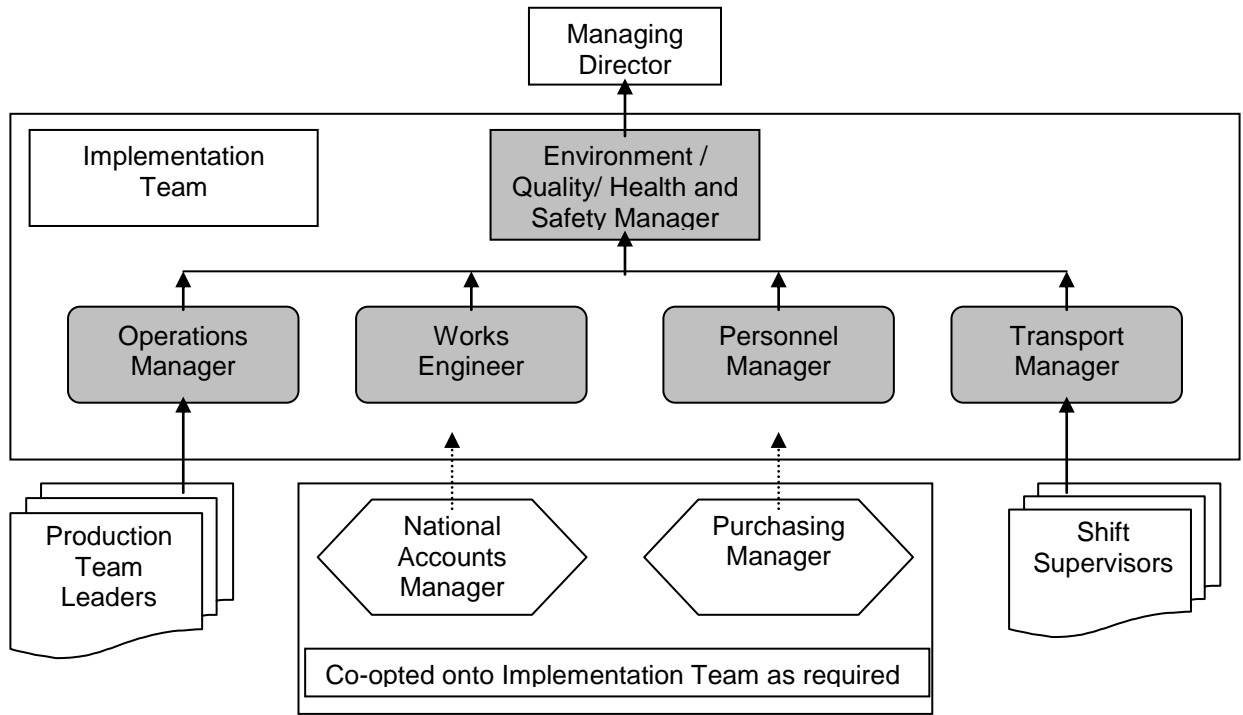
A team is worthwhile even in a relatively small company with a flat management structure – it helps to tap a wealth of ideas and gives everyone a sense of ownership.

### **1.1.4 Outlining Management Structure and Responsibilities**

Once the implementation team takes shape, it is good to outline the management structure you envisage for running the EMS. In addition to this, you can then assign responsibilities as tasks and requirements become apparent (e.g. training, data collection, planning, and communication). This will help clarify for everybody how the EMS fits into the existing organisational structure, and can help people to focus more on their roles and development of the systems under their responsibility.

The use of an 'organogram' (i.e. organisation chart) like the following example can be an effective way of defining the structure.

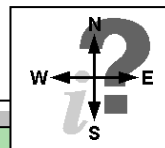
Example 'Organogram' for an Environmental Management System



**Phase 1 Stage 1 Checklist**

- Brainstorm drivers, opportunities, strengths, and barriers to establishing an EMS.
- Present the EMS project proposal to Senior Management (if applicable).
- Gain commitment to follow the BS 8555 implementation plan.
- Secure commitment below senior management levels.
- Secure resources necessary to implement your programme.
- Identify initial activities to help maintain management commitment and enhance the credibility of the project.
- Identify key individuals to form an implementation team.
- Outline management structure and responsibilities under the EMS.

# The Baseline Assessment



## Why

Making any assumptions about where you start from can easily make the rest of the journey a fraught nightmare. This is as true of implementation projects as it is of anything else in life. For that reason it's worth carrying out a thorough, ground clearing baseline assessment of your existing management practice and environmental performance. Many companies are surprised at how much they already have in place (though it may not always carry the label 'environment') and others get to know how much more they have to do than originally anticipated.



## How

- Establish the scope of your baseline assessment. This will include the physical boundaries and a description of the business activities falling under the EMS.
- Try mapping out the physical boundaries of your proposed EMS - include environmental considerations such as a drainage plan (both surface and foul drains), chemical/oil storage points, location of waste skips, chimney stacks from boilers or process lines, car parks, wind direction, local neighbours, areas of frequent pollution/spills etc, previous uses of the site, potential contaminated land. This list is not exhaustive, just an indication of what could be included.
- If your business activities do not lend themselves to be marked easily on a site map, try to establish your baseline by using a series of simple process flow diagrams. Identify the flow of business activities and then mark on the same diagram their associated environmentally related inputs and outputs.
- ISO14001, EMAS and BS 8555 ask you to identify not only business processes that you can control but those you can have influence over as well. These might not always be immediately apparent, so this can best be done in a number of ways, including group brainstorming, process mapping, and input/output charts.
- Using the outputs from the above exercise, identify any changes to the environment that your organisation causes (impacts) and the activities that cause them (aspects). Use a common sense approach – once again, brainstorming is an effective method of tackling this section. Don't forget to use the outputs from the mapping approach or process flow diagram.
- If you are aware of any applicable environmental legal obligations, make a note of them in a 'draft legal register'. Such obligations may include licences, discharge consents etc. A detailed identification and analysis of compliance is covered in Phase 2 of BS 8555.
- Finally, your baseline assessment should include a review of existing management practices. For example, you may already have a system for identifying and recording your training under Investors in People, or use risk identification techniques within your QMS or H&S system. If these techniques are effective, build them into your EMS.



## Case Study



Kennedy Utility Management provides civil engineering services in the utilities sector to a wide range of major utility providers throughout the UK. They were introduced to BS 8555 through work with their project mentor, United Utilities. The Kennedy EMS implementation team were instrumental in identifying environmental aspects, and in briefing all operatives and agents.

Kennedy's business involves co-ordinating and controlling the activities of large numbers of employees and sub-contractors spread over wide regions of the UK in small teams. It was recognised at the outset that the greatest challenge faced in the ISO14001 implementation would be raising awareness and getting involvement right down to each gang member, where the greatest impacts on the environment are likely to occur.

Taking up this challenge, Kennedy's ISO14001 Implementation team developed an environmental induction course for every new starter, a series of tool box talks and a foundation course which is delivered to all gang members and sub-contractors.

On successful completion of the course, the gang member or sub-contractor gains a 'Green Ticket' to demonstrate their understanding and ability to disseminate the necessary information to enable their gangs to minimise environmental impacts. This is a good example of influencing what the organisation could not directly manage.

# The Baseline Assessment

## BS 8555 Achievement Criteria

Information showing most likely significant environmental aspects of the business.



Information about key legal requirements.



Information regarding the site, the history of the site and any environmental implications.

## Practical Examples

- Process mapping, input/output charts, mapping with well annotated keys.
- A list of business activities, products or services with associated environmental aspects and impacts.
- Site plan with drainage routes highlighted.

- Business process maps or site plans with activities governed by legal obligations highlighted.
- A draft list of applicable environmental legislation.
- Completion of the [legislation identification questionnaire](#).

- Documents outlining the history of the site including past uses and environmental incidents. These may include newspaper cut-outs, old ordnance survey maps or results of library research.

## Top Tips



- A thorough baseline assessment provides a good foundation for the EMS development and could save time.
- Don't get bogged down in too much detail at this stage – concentrate on the big issues.
- Try to involve people as much as possible in the assessment, as it will help to raise awareness and give people a better understanding of the EMS and your environmental issues.
- Think about where your operations cause a change in the environment – impacts.
- Identify the causes of these impacts – aspects.
- Don't re-invent the wheel – see where it might be possible to use existing procedures, practices, and information.
- Look for 'quick wins' like risk reduction and cost savings. (waste and energy are always a good starting point)
- Use the baseline assessment as the springboard for initiatives and actions, and maintain the momentum.

## References

Envirowise publications (available free from <http://www.envirowise.gov.uk/envirowisev3.nsf>)  
GCO20 - [Environmental Review Helps Raise Profits](#)  
EMAS Regulation [Annex VI and Annex VII](#)

The baseline assessment is one of the most important Stages in Phase 1 because it forms the foundation on which the EMS is built. It should provide an understanding of what is important for the organisation from an environmental viewpoint, and help to establish your current level of environmental performance. This is pretty important as many small companies do not think they have any environmental impacts at all. (This, by the way, is not physically possible – as individuals, we even continue to impact on the environment when we're dead – ask any undertaker).

The assessment involves a number of important steps:

### **1.2.1 Establish the Scope of the Baseline Assessment and the People Involved**

The scope of the Baseline Assessment may initially be limited to just the site boundary and the activities, products or services within it, although this may need to be widened when defining the scope of the EMS to account for all of the significant environmental aspects and impacts identified. Some service industry companies for example may have their major impacts only on their clients' sites.

The baseline assessment also offers a good opportunity to start raising awareness and understanding of EMS and BS 8555, by involving key people in the process. The project will be most effective as a team effort. For example, when identifying activities, products or services, and likely significant environmental aspects and impacts (sections 1.2.4 & 1.2.5 below), try and involve people from all areas of the organisation. A good brainstorming session with a few key people can be far more effective than undertaking the task alone.

### **1.2.2 Produce Site Plan & Drainage Plan**

A site plan is a useful starting point for conducting a baseline assessment. It can help to ensure that all areas and activities are covered. The site plan doesn't need to be perfect or a highly complex technical drawing, but should represent all the main features of the site and be drawn to scale.

It is also important to have a drainage plan for the site. All drains need to be clearly marked and identified as either surface water or foul drains (including drains leading to the site's own effluent treatment plant if applicable). The route and destination of the drains should be identified on the plan. This is particularly important as the drains provide a route off-site for potential pollution from spillages or contaminated water, with associated legal issues, both to surface and foul drains.

### **1.2.3 Establish the Environmental History of the Site**

This doesn't need to be an in-depth research project, but a general review of previous activities and environmental incidents on site, which will help to identify potential environmental risks and liabilities. This should include a review of:

- Previous use of the site - any likely sources of contamination (toxic chemicals, buried waste etc).
- Major spillages or pollution incidents (chemicals, fuel, oils etc).
- Breaches of licences/consents and/or prosecutions.
- Major fires.
- Serious or frequent complaints.

With all previous incidents, review what (if any) remedial action was taken, its effectiveness and any resulting changes to operations or procedures. (N.B. Your organisation can be held

liable for the clean up [remediation] of previous ground contamination, even if this was caused by a previous owner or occupier).

Your property deeds will contain all the previous owners and activities that have historically been on your site. If your organisation does not hold the site freehold, try your site agent or landlord. Alternatively, you could undertake discussions or questionnaires with employees that live locally, regulators, the Local Authority Planning Department, or site neighbours. Historical maps might also indicate former uses of your site.

### **1.2.4 Identify Main Activities, Products & Services**

ISO14001 and EMAS, which BS 8555 helps companies move towards, contains a requirement for an organisation to *“establish and maintain a procedure to identify the environmental aspects of its activities, products or services that it can control and over which it can be expected to have an influence...”*

This can be a really useful exercise and one that gets easier to update every time you look at it after your first attempt. In order to achieve the basis for this procedure, however, you must first identify the relevant activities, products or services that your organisation is involved with. This is again most effective when completed as a group activity, ideally with representatives from all main areas of the organisation. A number of methods can be employed to aid the process:

- Group brainstorming – simply listing all activities.
- Splitting the organisation into departments/areas and focusing on each area in turn.
- Process mapping diagrams, outlining processes from start to finish. This is perhaps more suited to manufacturing operations, tracing the process from raw materials in, to finished products out.
- Input/Output charts.

N.B. Don't forget to include non-core activities such as utilities provision (heating, lighting, water, offices, vehicle use etc).

### **1.2.5 Identify Likely Significant Aspects & Impacts**

Having identified all relevant activities, products and services, the next step is to determine their likely environmental aspects and impacts. But exactly what are aspects and their associated impacts?

#### **DEFINITIONS (used in BS 8555, ISO 14001 and EMAS)**

##### **Environmental Aspect**

“Element of an organisation's activities, products or services that can interact with the environment”.

N.B. A significant environmental aspect has or can have a significant environmental impact.

##### **Environmental Impact**

“Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's activities, products or services”.

##### **Environment**

“Surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans, and their interrelation”.

N.B. Surroundings in this context extend from within an organisation to the global system.

It's probably easiest to think of impacts as the actual change to the environment and aspects as the activities, products or services that cause those impacts. End of pipe solutions can help to minimize impacts to an extent, but it's often easier and cheaper to manage those impacts out of existence by concentrating on what gave rise to them in the first place.

At this stage, you're only trying to identify aspects and impacts, not put them in any pecking order, so use the information produced in section 1.2.4 as a basis for this identification process.

Remember this is only the baseline assessment, so concentrate on the main likely significant environmental aspects and impacts. You will need to consider the following areas in your assessment:

- Emissions to air.
- Releases to water.
- Waste management.
- Contamination of land.
- Use of raw materials and natural resources.
- Other local environmental and community issues (including noise, odour, dust, transport, biodiversity etc).

A full evaluation of all environmental aspects and impacts, including significance evaluation is covered in Phase 3 of BS 8555, so you'll be wanting to revisit this exercise at a later stage. To that extent it's worth keeping all the original paperwork and notes.

If you have used a flow chart or input/output chart, you may like to expand this to include environmental aspects and impacts. Sample check sheets for this process are included in Appendices [1.2.1](#) and [1.2.2](#).

The following table provides further guidance to aid the identification of environmental aspects/impacts:

<p><b>AIR</b></p> <p>Boilers?  Generators?  Vehicles and equipment?  Furnaces, incinerators?  Welding and soldering?  On-site burning?  Use of solvents?  Use of fumigation?  Evaporation of chemicals?  Refrigeration plant (escape of refrigerant gas)?  Is exhaust ventilation used?</p>	<p><b>WATER</b></p> <p><b>Drains and Grates</b> – surface water – where do they go?  Are oil interceptors fitted?  Separation pots, tanks, or filters?  Reed beds – what checks are done?  Cut-off valves?  <b>Foul Sewers</b> – where do they run?  Inspection cover locations?  Septic tanks – how often are they pumped?  Water treatment units – where do they discharge to? What checks are done?  Cleaning operations?  Spraying operations?  De-watering – pumping out water?  Abstraction of water from water bodies or bore holes?  <b>Nearby Water Bodies</b> – rivers, streams, ditches, ponds, lakes, underground aquifers, sea?  Note: think also of water as a resource – it costs.</p>
<p><b>LAND</b></p> <p>Unmade ground or laid to hard standing?  Is hard standing permeable?  Any history of contamination?  Discharges of liquid waste across ground?  Potential for leakage, spillage, or escape of pollutants into the ground?  Are vehicles or machinery parked on unprotected ground?  Are fuels or other chemicals stored on unprotected ground?  Any burial of waste? e.g. pollutants – oils, pesticides, herbicides, fertilisers, treatments, solid waste.</p>	

<p><b>WASTE</b></p> <p>Where is waste generated? And in what sort of quantities?</p> <p>Where are skips located? And what sort and size are they?</p> <p>Are there any hazardous wastes (special waste) – e.g. waste oils, pesticide washings, solvents, clinical waste, asbestos?</p> <p>Is there any recycling of waste materials?</p> <p>Note any segregation bins.</p> <p>Are waste skips covered and/or sealed?</p> <p>Are waste skips likely to leak polluting liquids (e.g. compactors can leak hydraulic fluids)?</p> <p>How is waste transported, handled, and removed from site?</p>	<p><b>HAZARDOUS CHEMICALS &amp; FUEL</b></p> <p>What storage facilities exist?</p> <p>Are these bunded or protected against leaks, spills or collisions?</p> <p>Is spill containment and clean up equipment provided (e.g. spill kits, booms, mats)?</p> <p>Can stop valves be easily located (for tanks and supply lines)?</p> <p>Are storage areas secured against theft or vandalism?</p> <p>Are storage areas exposed to the elements?</p> <p>Are there any signs of corrosion on containers or tanks?</p> <p>If bunds exist, are they impermeable?</p> <p>Are there any obvious signs of leaks, spills or escapes?</p> <p>Where would any leaks, spills or escapes go – e.g. nearby ground, surface drains?</p> <p>Are deliveries supervised?</p> <p>How are chemicals or fuel handled?</p>
<p><b>NUISANCE</b></p> <p>Do operations create excessive:</p> <p>Dust?</p> <p>Noise?</p> <p>Odours?</p> <p>Fumes?</p> <p>Light?</p> <p>Vibration?</p> <p>Traffic congestion or obstructions?</p>	<p><b>PLANNING</b></p> <p>Listed Buildings?</p> <p>New structures?</p> <p>Change of use of existing structures?</p> <p><b>FLORA/FAUNA &amp; ARCHAEOLOGY</b></p> <p>Protected trees?</p> <p>Protected species (e.g. Newts, Badgers)?</p> <p>Designated Heritage Sites, Conservation Areas, or Sites of Special Scientific Interest?</p> <p>Hedgerows?</p> <p>Breeding grounds?</p> <p>Other noteworthy animal or plant life?</p> <p>Archaeological remains on site?</p>
<p><b>OTHER USEFUL INFO</b></p> <p>Complaints from neighbours or communities?</p> <p>Previous environmental accidents or incidents?</p> <p>Previous prosecutions or warnings?</p> <p>Flooding incidents?</p> <p>Prevailing wind direction?</p>	<p><b>RESOURCE CONSUMPTION</b></p> <p>Materials, components?</p> <p>Packaging?</p> <p>Cleaning products, and ancillary products?</p> <p>Tools and equipment?</p> <p>Energy – petrol, diesel, electricity, gas, solid fuels,</p> <p>Compressed air, steam?</p> <p>Water – hot water is often heated by energy bought in?</p>

### **1.2.6 Identify Key Legal Requirements**

A full assessment of all legal and other requirements is covered in Phase 2 of BS 8555. However, at this stage it is still important to identify the main legal requirements affecting the organisation on a day-to-day basis. This will give the earliest possible opportunity to address

any potential compliance issues and to reduce the risk of prosecution. As a rough guide, environmental legislation will generally fall into one of four main categories:

- 1) Land (including waste disposal to land and land contamination)
- 2) Air
- 3) Water
- 4) Nuisance.

A checklist to aid this initial assessment is included in [Appendix 1.2.3](#). This checklist is not exhaustive and you should read the legal notice printed at the bottom of the checklist.

Further guidance can be obtained online from “NetRegs” on their website, at the address: [www.netregs.gov.uk](http://www.netregs.gov.uk). NetRegs provides free environmental guidance to help businesses in the UK, particularly small and medium-sized enterprises (SMEs), comply with environmental legislation and protect the environment. NetRegs is a partnership between the Environment Agency, the Scottish Environment Protection Agency (SEPA) and the Northern Ireland Environment Agency (NIEA).

At this stage you need to identify:

1. What is the main environmental legislation affecting your business?
2. Are you complying with the requirements of this legislation?
3. If not, what do you need to do to comply, and by when can this be achieved?

Don't assume that the processes you run are too small or not toxic enough to be covered by legislation. Manufacturing and associated processes obviously pose more of a risk to the environment than service industry work, but even here, there may be impacts that are covered by the law. Remember, ignorance and assumptions are not regarded as a credible defence in courts of law.

### **1.2.7 Other Considerations**

Some other areas that you may wish to consider at this early stage are:

- **Views of interested parties**  
This could include a wide range of people and organisations with an interest in the environmental performance of your organisation (e.g. shareholders, senior management/directors, employees, customers, regulators and neighbours). At this point, brief discussions or a review of previous communications should suffice.
- **Reviewing Existing Management Practices and Suitability for ISO14001 and/ or EMAS**  
If your organisation is eventually thinking of going for ISO 14001 or EMAS, it's worth reviewing how you do what you do now. You may already meet a number of ISO 14001 and EMAS requirements, either fully or partially, through existing management practices and procedures within the business (e.g. within procedures for managing quality, health & safety, emergency situations, communications, training). There is no point in re-inventing the wheel for the sake of ISO 14001 or EMAS. If you can use existing tried and tested methods (possibly with some minor modifications to incorporate environmental issues), then do so. A checklist has been provided in [Appendix 1.2.4](#) to aid this process.
- **Assessment of potential environmental costs & benefits, barriers & opportunities**

During the baseline assessment, a number of issues may become apparent that offer opportunities for improving performance or for saving/generating money. You will probably also identify situations that will incur costs to rectify, or present barriers to progress. Through early action you can prepare the ground for changes, and possibly realise some benefits before you tackle the more awkward issues.

- **Identification of environmental taxes and levies**

Taxes and levies are often imposed by the government to help protect the environment. They are often used to restrict finite resource consumption or pollution, and to encourage market driven solutions. Most organisations will be affected by environmental taxes or levies, which are generally forecast to grow in both number and type. Examples include petroleum fuel duty, climate change levy, landfill tax, aggregates tax, and indirectly the charges levied for Packaging Recovery Notes (PRNs) under the Producer Responsibility (Packaging Waste) Regulations. The converse to these taxes and levies is that there is money available under Government schemes for certain environmental projects. These schemes will run for finite periods and are subject to review and alteration, but it is worth contacting [Envirowise](#) or [DEFRA](#) for details of where funding might be available. Two examples of schemes that have been run are the Landfill Tax credit scheme and the Powershift programme. By focusing on these issues you might be able to identify potential cost savings, forecast forthcoming tax impacts, or even secure some financial support for improvement projects and initiatives.



### Phase 1 Stage 2 Checklist

- Scope of baseline assessment established?
- Site plan with drainage system developed?
- Site history researched for any environmental issues?
- Main activities, products, and services identified?
- Likely significant aspects and impacts identified?
- Key legal requirements identified?
- Existing management practices identified and assessed for use in the EMS?
- Environmental costs, potential benefits and views of interested parties identified?
- Initial opportunities for improvement initiatives identified?
- Plans developed to address legal compliance issues?

## Appendix 1.2.1                      Process Analysis Sheet

### **Guidelines for Completion**

Visit the activity when completing the form. If necessary speak to operators/staff to gain a better understanding of the process.

### **Activity/Product/Service**

Identify the activity, product or service and enter into the box. Do not forget to evaluate past activities carried out on-site, planned future activities, or site wide issues such as energy/resource consumption.

Examples are:                      Activity – Handling of hazardous materials  
   Product – Product refinement  
   Service – Vehicle maintenance

### **Inputs**

List the generic inputs and identify any use of resources such as water, electricity etc.

### **Outputs**

List the generic outputs and make an assessment of any noise, vibration or odour.

### **Outputs – Air**

Assess if there are any emissions to air, visible plumes or dust (this could be done from the boundary of the site).

### **Outputs – Land**

List the waste streams arising from the process and if they are contained correctly.

### **Outputs – Water**

Identify if any effluent is generated and where the effluent is discharged (foul or surface drain or direct to controlled waters/ground). It is advisable to obtain a drainage plan for the site.

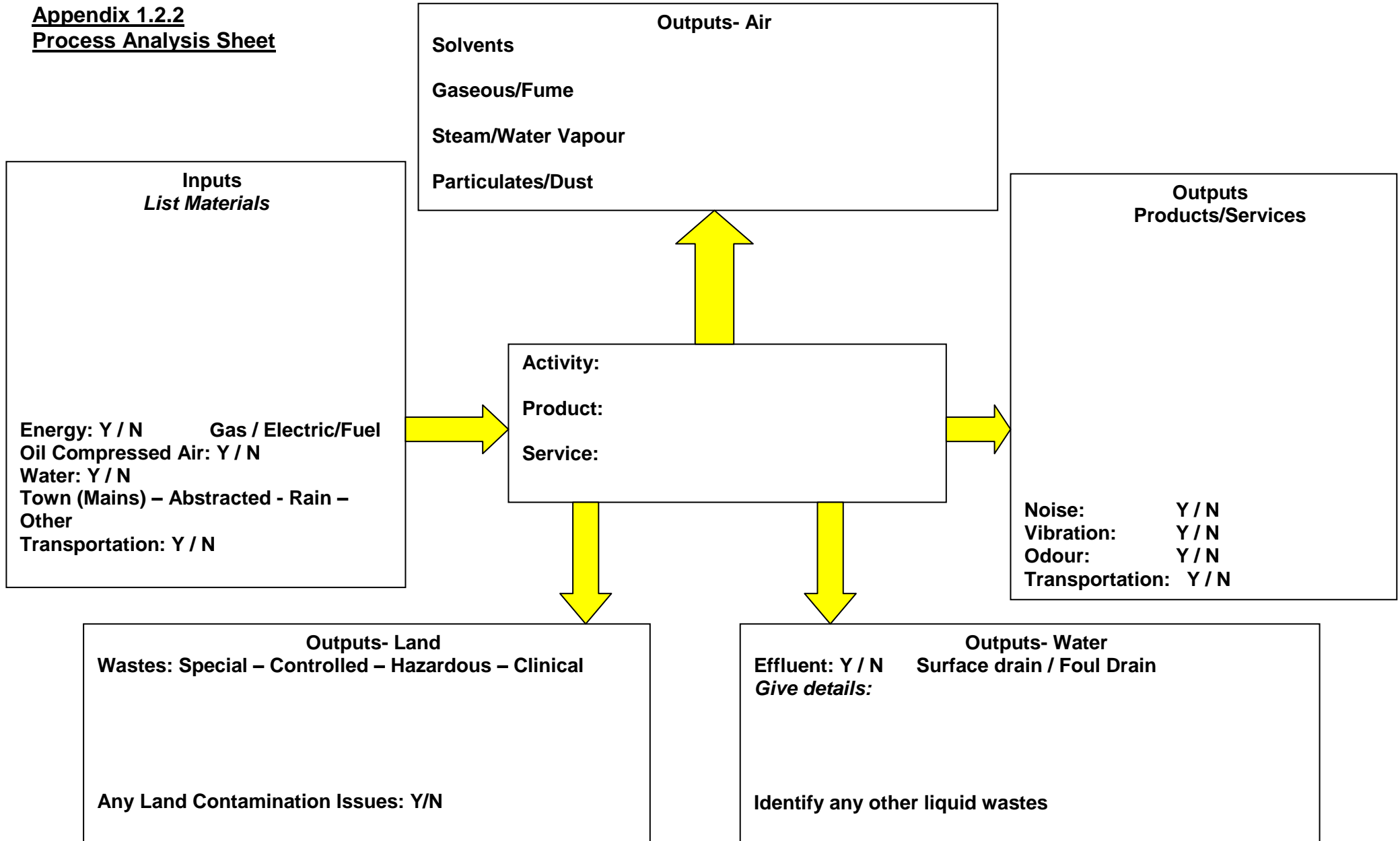
Following completion of the process analysis, a simple matrix can now be used to identify the environmental aspects and associated environmental impacts. The following example mirrors that on page 9 of the international standard, ISO 14004.

<b>Activity/Product/Service</b>	<b>Aspect</b>	<b>Impact</b>
<b>Activity</b> – Handling of hazardous chemicals	Potential for accidental spillage	Contamination of soil or water
<b>Product</b> – Product refinement	Reformulation of the product to reduce volume	Conservation of natural resources
<b>Service</b> – Vehicle maintenance	Exhaust emissions	Reduction of air emissions

Use the information gathered during the process analysis exercise to complete the aspects and impacts columns.

It is important to walk through your operation as well if using this approach, as a desk top survey may miss important issues on the ground – often there are sources of environmental impact not directly related to any main activity, product, or service.

**Appendix 1.2.2**  
**Process Analysis Sheet**





### Appendix 1.2.3 Legislation Identification Questionnaire

SITE INFORMATION	YES	ADDITIONAL INFORMATION	APPLICABLE LEGISLATION
<b>Integrated Pollution Control</b>			
Do you have any Prescribed Processes regulated by the Environment Agency (EA)? Part A1 or Part A2.		Prescribed Processes are permits to operate that apply to certain industrial processes. Process Guidance Notes outline the details of those processes affected.	EPA 1990 Part 1 Sections 6-15 (as amended by Environment Act 1995). (EPA Part 1 to be repealed by Pollution Prevention & Control Act 1999). EPA (Applications, Appeals & Registers) Regs 1991 (SI 507), amended by SI1996/667 SI1996/979 SI1996/2678.
Do you have a Prescribed Process regulated by a Local Authority? Part B.		Air Pollution Control. Certain operating conditions apply depending on process. e.g. > 5 tonnes of solvents used. >20 tonnes of powder coatings used.	EPA Part 1, Section 2 (as amended by Environment Act 1995). Environmental Protection (Prescribed Processes & Substances) Regs 1991 SI 472 (as amended by SI 1991/836, SI1992/614, SI1993/1749, SI 1993/2405, SI 1994/1271 SI1994/1329, SI1992/3247, SI1996/2678 & SI1998/767) (Also above legislation applies).
Will your process be covered by IPPC?		All processes covered by IPC will be transferred to IPPC by 2007 by the Pollution, Prevention & Control Act 1999. The transfer is being phased, some sectors have already made the transition while others have a longer time period for this to occur. In addition, all new or substantially changed installations are required to comply. Many new areas fall under IPPC which were not previously covered by IPC. Details of the timetable for the phasing in of the regulations to different sectors are available from the Environment Agency or DEFRA.	
Are there any electricity sub-stations or transformers on site containing Poly Chlorinated Biphenyls (PCB's)?		If under your control they need to be registered with the Environment Agency.	Environmental Protection (Disposal of Polychlorinated Biphenyls & Other Dangerous Substances) Regulations 2000 (SI 1043).
Are there any materials containing lead on your site or used in your process?		Old pipe-work or is lead used as part of your process, or in solders etc?	Control of Lead at Work Regs 1998 (SI 543).
Do you use any pesticides or herbicides?		Check whether pesticides are used for grounds maintenance on sites under your control.	Food & Environment Protection Act 1985 Part III (as amended by Pesticides Act 1998). Control of Pesticides Regs 1986 (SI 1510).
<b>Atmospheric &amp; Air Quality</b>			
Are your premises within a Smoke Control Area?		Check with your Local Authority Environmental Health Dept.	Clean Air Act 1993. Smoke Control Areas (Authorised Fuels) Regs 1991 (as amended by SI1992/72, SI1993/2499, SI1996/1145, SI 1997/2658.

<b>SITE INFORMATION</b>	<b>YES</b>	<b>ADDITIONAL INFORMATION</b>	<b>APPLICABLE LEGISLATION</b>
Do you have or plan to have any chimneys or exhaust stacks?		It is an offence to produce dark smoke from chimneys except for certain exemptions.  Applicable to chimneys, boilers, indirect heating appliances and furnaces. Defines fumes as: <i>any airborne particulates other than dusts.</i>  Relates to height of chimneys.	Clean Air Act 1993. Dark Smoke (Permitted Periods) Regulations 1958. Clean Air Emission of Dark Smoke (Exemption) Regs 1969. Clean Air Act (Emission of grit and dust from Furnaces) Regs 1971. Clean Air Act (Arrestment Plant) (Exemption) Regs 1969 (SI 1262). Clean Air Act (Measurement of Grit & Dust from Furnaces) Regs 1971 (SI 161). Clean Air Act (Heights of Chimneys) (Exemption) Regs 1969 (SI 411).
Does your organisation own any vehicles?		It is an offence to use a vehicle if it is emitting any smoke or visible vapours. Introduced standards enforced through the annual MOT certificate.	Road Vehicles (Construction & Use) Regs 1986 (SI 1078) (Amendment No 2) Regs 1990. (Amendment No 5) Regs 1995.
<b>Water</b>			
Do you abstract water from a borehole, well or other watercourse?		A Water Abstraction Licence from the Environment Agency is required.	Water Resources Act 1991, Section 24. Water Resources (Licences) Regulations 1965 (SI534) as amended by SI 1965/2082, SI 1989/336).
Does your site discharge effluent to foul sewer?		A Trade Effluent Consent from your sewerage undertaker will be required for all discharges to foul sewer.	Water Industry Act 1991 (Section 118). Trade Effluents (Prescribed Processes & Substances) Regs 1989 (SI 1156) (as amended by SI 1990/1629 & SI 1992/339).
Does your site discharge effluent to surface water drains or to soakaways?		A Discharge Consent from the Environment Agency is required.	Water Resources Act 1991, Section 85.
Do you have an outside tap, or use hosepipes?		An anti-siphon valve must be fitted to prevent back siphoning of water.	Water Industry Act 1991 (Section 73).
Are any of your water fittings leaking or in disrepair?		Water fittings must be kept in good repair to prevent water wastage.	The Water Supply (Water Fittings) Regs 1999 (SI 1148). Control of Pollution (Applications, Appeals and Registers) Regulations 1996 (I 2971). Water Resources Act 1991 Section 85.
<b>Waste</b>			
Do you transport any wastes as part of your activities?		You may carry your own wastes without a licence, providing it is not construction or demolition waste.	Control of Pollution (Amendment) Act 1989. Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regs 1991 (SI 1624) as amended by SI 1992/588, SI 1996/553, SI1996/605, SI1998/605.

<b>SITE INFORMATION</b>	<b>YES</b>	<b>ADDITIONAL INFORMATION</b>	<b>APPLICABLE LEGISLATION</b>
Do you have any hazardous (Special Wastes) for disposal?		The handlers of Special Wastes are required to use Consignment Notes, which must be kept for 3 years.	EPA 1990 Part II, Section 62. Special Waste Regs 1996 SI 972 (as amended by SI 1996/2019, SI 1997/251).
Do you produce wastes for disposal?		All industrial and commercial wastes are referred to as 'Controlled Waste.'	EPA 1990 Part II Section 75 (as amended by Environment Act 1995). Controlled Waste Regs 1992 (SI 588) (as amended by SI 1993/566) Waste Management Licensing Regs 1994 (SI 1056) (as amended by SI 1995/288, SI1995/1950, SI 1996/634, SI 1997/2203, SI 1998/606. EPA 1990 Part II Section 34. Environmental Protection (Duty of Care) Regs 1991 (SI 2839).
Do you dispose of any liquid waste via land spreading or injection, for agricultural benefit?		This is still classed as Controlled Waste and subject to all the usual waste regulations.	As above.
Is any of your waste disposed of by land filling?		A tax is placed on waste disposed of in landfills. Currently £14 / tonne for general waste and £2/t for inert wastes. From 2005/6 the landfill tax is set to rise by £3 per year, up to £35/t.	Landfill Tax Regs 1996 (SI 1527) as amended by 1996/2100, SI 1999/3270. Landfill Tax (Qualifying Material) Order 1996 SI 1528.
Do you use Waste Contractor(s)?		You should obtain copies of the Waste Carriers Licences from your contractor, and ensure that you know the final destination for your waste disposal.	Environmental Protection (Duty of Care) Regs 1991 (SI 2839).
Do you burn any wastes?		Burning of waste via burning or the use of incinerators will likely require an Exemption Licence from the E.A.	EPA 1990 Part II Sections 35 –44 (as amended by Environment Act 1995). Waste Management Licensing Regs 1994 (SI 1056) as amended by SI 1995/288, SI 1995/1950, SI 1996/634, SI 1997/2203, SI 1998/606. Clean Air Act 1993. Dark Smoke (Permitted Periods) Regulations 1958.
<b>Waste – Packaging</b>			
Do you supply any packaging materials for your finished products?		Ensures packaging is minimised and is able to be reused, recycled or recovered, and if required, disposed of safely.	Packaging (Essential Requirements) Regs 1998 SI 1165.
Did you own & handle more than 50 tonnes of packaging last calendar year? (includes new pallets and plastic crates)		To qualify you must also have a turnover in the last financial year of > £2 million.	Environment Act 1995 Part V. Producer Responsibility Obligations (Packaging Waste) Regs 1997 (SI 648) as amended by SI 1999/1361.
<b>Contaminated Land</b>			
Do you have any underground storage tanks? Have there ever been any spillages of oils or chemicals on your site?		Are you aware of any contaminated land on your site, either from your activities or historically?	Environmental Protection Act (EPA) 1990 Sections 78A-78YC (as amended by Environment Act 1995, Section 57). Contaminated Land (England) Regs 2000.

SITE INFORMATION	YES	ADDITIONAL INFORMATION	APPLICABLE LEGISLATION
<b>Planning &amp; Wildlife</b>			
Are any of your buildings listed?		Listed buildings are those which have been recognised as being of particular Heritage interest.	Planning (Listed Buildings & Conservation Areas) Act 1990.
Do you know the Planning Status of your land?		i.e. industrial, commercial, residential. Check that there are no restrictions attached to your planning consent that could restrict specific activities.	Town & Country Planning Act 1990 (as amended by Planning & Compensation Act 1991).
Is your site enclosed and protected by a boundary fence?		If your site is not enclosed then you need to be aware of this legislation. It particularly applies if you have a history of vandalism incidents.	Occupiers' Liability Act 1957 (as amended by Occupiers' Liability Act 1984).
Are you close to any SSSIs, or other nature conservation areas?		SSSIs are Sites of Special Scientific Interest.	Wildlife & Countryside Act 1981. Conservation (Natural Habitats etc) Regs 1994 (SI 2716). Hedgerows Regulations 1997 (English Nature)..
Are there any badger setts on or close to your site?		It is an offence to kill or interfere with badgers or their setts (or attempt to do so).	Protection of Badgers Act 1992 (English Nature).
Are there any trees protected by a Tree Preservation Order?		If unsure, check with your local Planning Dept.	Town & Country Planning Act 1990, Section 198 (Local Authority).
<b>Hazardous Substances - Health &amp; Safety</b>			
Do you have any asbestos on your site?		Often found in roofing, as drainpipes, lagging and insulation in boiler houses.	Control of Asbestos at Work Regs 1987 (SI 2115). Asbestos (Licensing) Regs 1983 (SI 1649). Asbestos (Prohibitions) Regs 1992 (SI 3067).
Do you have any cooling towers or use re-circulating waters as part of your process?		Cooling towers and re-circulating waters are susceptible to legionella bacteria and should be regularly dosed with biocides.	COSHH 1999 (SI 437) (Control of Legionellosis). Notification of Cooling Towers & Evaporative Condensers Regs 1992 (SI 2225).
Do you have any radioactive substances on site?		Found in some paint spraying equipment, spectrometers and other laboratory/testing equipment.	Radioactive Substances Act 1993 Regulations 1996 (SI 1350). Environment Act 1995 (Section 22 Paragraph 217). Public Information for Radiation Emergencies Regs 1992 (SI 2997) Euratom Directive 89/68.
Do you have any air conditioning or refrigerating units on site?		If the fridges etc. are > 5 years old, they are likely to contain CFCs.	Environmental Protection (Controls on Substances that Deplete the Ozone Layer) Regs 1996.
Do you use, handle or store any hazardous materials on site?		Link to COSHH register.	Control of Substances Hazardous to Health Regs 1999 (SI 437).
Do you supply hazardous substances?		Chemicals supplied must be properly labelled as to contents and any associated hazards.	Chemicals Hazard Information & Packaging (CHIP) Regs 1994 (SI 3247) (as amended by CHIP II Regs SI1996/1092 SI1997/1460, SI1998/3106, SI 1999/197).
If you are storing hazardous materials on site, do you need to inform the local emergency services or planning authority?		Applies to storage of hazardous materials on, over or under land above a specified quantity.	Notification of New Substances Regs 1993 (NONS). Planning (Control of Major Accident Hazards) Regs 1999. Dangerous Substances (Notification & Marking of Sites) Regs 1990.

SITE INFORMATION	YES	ADDITIONAL INFORMATION	APPLICABLE LEGISLATION
<b>Nuisance</b>			
Do you have an audible security alarm? Does it cut out after 20 minutes?		Check if you are in a Noise Abatement Zone.	Noise & Statutory Nuisance Act 1993 (Audible Intruder Alarms not yet covered but does contain user guidelines).
Do you carry out any activities that cause noise or vibration?		Have you received any complaints, either directly or via the Local Authority?	E.P.A. 1990 Part III Statutory Nuisance) Section 79.
Are you required to monitor internal noise Phases for Health & Safety reasons?		Depending on your internal noise Phases, you may need to check your noise Phases at your boundary.	Health & Safety at Work Act 1974. Noise at Work Regs 1989 (SI1790).
Are your premises in a Litter Abatement Zone?		If unsure, check with your Local Authority Environmental Health Dept.	EPA 1990 Part IV Sections 89 – 94. Litter Control Areas Order 1991 (SI 1325) as amended by SI 1997/633.
Are you situated in a residential area, or do you have close neighbours?		Complaints from neighbours relating to smells, dust or noise to Environmental Health at Local Authority.	Environmental Protection Act (EPA) 1990 & also Part III Noise & Statutory Nuisance Act 1993 Section 79. Control of Pollution Act (COPA) 1974 Part III, Section 72.

#### **IMPORTANT LEGAL NOTICE: PLEASE READ**

This checklist has been produced to help identify and simplify the requirements of the most relevant environmental legislation. It does not necessarily include all legislation that is applicable to specialised operations.

Whilst every care has been taken to ensure that the information contained on each page is accurate on the date it was amended last (as recorded at the foot of each page), it should not be taken as containing a definitive or comprehensive set of instructions that would protect against enforcement action or prosecution if they were to be followed exactly.

Furthermore, any attempt to cover all eventualities comprehensively would work against the stated goal of clarification and simplicity especially since no two companies are exactly the same. It is for these reasons that 'the BS 8555 SME Workbook ' disclaims any responsibility and/or liability for any errors or omissions. These guidance notes should not, therefore, be used to replace professional help and legal advice on the liabilities and responsibilities of those companies using it.

## **Appendix 1.2.4 Existing Management Practices & Procedures Checklist**

Identify existing practices/procedures that might be of use using the Yes/No boxes.

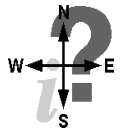
Y N

- |                          |                          |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Waste disposal notes/transfer notes/ Waste management licences.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Licences for discharge to watercourses or sewers.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Water abstraction licences.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Licences for emission to atmosphere.  |
| <input type="checkbox"/> | <input type="checkbox"/> | IPC and LAAPC licences (including new requirements for release inventory).  |
| <input type="checkbox"/> | <input type="checkbox"/> | IPPC authorisations.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Any exemptions from environmental legislation.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Emergency arrangements.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Fire emergency arrangements.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Noise, Vibration, Dust, Odour, or Light control.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Provision of environmental requirements in procurement procedures.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Health and safety risk assessments.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Environmental accident/incident reports.  |
| <input type="checkbox"/> | <input type="checkbox"/> | COSHH – information/data sheets.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Environmental training.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Security arrangements.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Geological information or surveys relating to the site.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Due diligence reports, or details of previous environmental assessments.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Town & Country Planning information, public registers/planning consents, environmental statement for sites/projects subject to the EIA Regulations. |
| <input type="checkbox"/> | <input type="checkbox"/> | Historic information on the use of the site.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Correspondence or requirements from customers.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Correspondence from other interested parties.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Information from the Local Authority on local environmental issues.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Information from trade associations.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Information from suppliers/sub-contractors.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Information from plant/equipment suppliers.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Information or communications from Environment Agency.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Investors in People.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Existing documented Quality System.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Existing documented Health & Safety System.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Other relevant schemes or industry standards.   |

# Developing A Draft Environmental Policy

## Why

The environmental policy is what really drives the whole of your EMS, and when finalised, it becomes a publicly available declaration of your intentions and commitment to improving your environmental performance. At this stage, however, a draft policy simply helps to provide a focus for the further development of you EMS, and the document does not have to be seen by anyone outside the organisation. For those interested, it's also an ISO 14001 and EMAS requirement.



## How

- Before you begin, identify whether your organisation already has a policy, or has made environmental commitments within other management systems (e.g. H&S or Quality). Find out the background to these, and identify with current management whether these commitments still hold. Remember that policies are often developed in response to a specific request or challenge, therefore they may need to be amended/updated.
- A typical environmental policy need not take up more than one page of A4. It should include a list of broad environmental commitments and intentions. Identifying these could be achieved through a group brainstorming session. Remember that the finalised policy will need to be endorsed by senior management.
- A good environmental policy includes a brief description of the main activities, products or services that the EMS will cover. This provides the reader with an idea of the nature and scale of the company, and hence the scope of the EMS.
- ISO 14001 and EMAS require specific commitments to be included in your policy. These include compliance with relevant legal and other requirements, continual improvement, and prevention of pollution. Review a copy of ISO 14001 (clause 4.2) and familiarise yourself with its requirements. At this early stage, begin to think about what these commitments mean to your organisation, as these will be the focus for your EMS and will need to be upheld through actions (i.e. don't make promises you can't or don't intend to keep).
- Try and keep the policy general enough to avoid the need for frequent alterations and re-issues.



## Case Study



McNicholas Construction, a medium-sized utilities construction company, drafted their environmental policy at the training seminar for Phase 1 of BS 8555. The EMS representative reviewed previous attempts at developing a policy, and used the results of the baseline assessment to create a more meaningful and relevant draft policy.

Due to the managerial and operational structure of the company, the policy statement required input from a wide range of key parties in the company. In outlining the structure and content of the policy, the EMS Representative organised a brainstorming session consisting of key customers (external), key contractors (external), senior managers, operational managers, and operatives. Working collectively as a group, they managed to accommodate the range of interests represented into a streamlined policy. This was then finalised during Phase 3 of BS 8555 implementation and communicated to every employee and sub-contractor.

## **Developing A Draft Environmental Policy**

### **BS 8555 Achievement Criteria**

Is it appropriate to nature and scale of your organisation, and the environmental impacts of your activities, products and services?

Does it include a commitment to continuous improvement and prevention of pollution?

Does it include a commitment to meet relevant environmental legislation and regulations, and other requirements to which the organisation subscribes?

Does it provide a framework for setting and reviewing environmental objectives & targets?

Is it documented, maintained and supported by plans to communicate it internally and externally?

### **Practical Examples**

- Results from the baseline assessment incorporated into the intentions and commitments.
- Short paragraph describing the company's activities products and services.

- Bullet points embedded in policy specifically committing to continuous improvement, prevention of pollution and compliance to legal and other requirements.

- The reader of the policy should clearly see how the commitments and intentions provided a framework for setting environmental objectives and targets.

- Document control identifier on each document, a review schedule and some details as to how you plan to communicate the final version should be

### **Top Tips**

- Keep it simple and concise – one page of A4 is plenty.
- Eventually this will be a public document, so refrain from using jargon or statements that you can't substantiate.
- Avoid using loose terms such as 'environmentally friendly' as these are hard to define.
- At this stage of the BS 8555 implementation process, the policy is only a draft and can be altered later as your EMS develops.
- It is the actions of your staff that will implement your policy, so ensure they are aware of why a policy is being developed and what it contains.
- Remember to include a copy of the policy in your induction pack and put on notice boards
- Make sure that the policy is relevant to your organisation, and suited to the nature and scale of your activities – it should address your main environmental impacts identified from the baseline assessment.
- If you decide you want to issue the policy as a final version, ensure that it is dated and signed by a senior



### **References**

Envirowise publications (available free from <http://www.envirowise.gov.uk/envirowisev3.nsf>)  
EN322 - [How to develop an environmental policy: a guide for small companies](#)  
ISO 14001 section 4.2 – available from the British Standards Institution ([www.bsi-global.com](http://www.bsi-global.com))

### **1.3.1. Planning your Policy**

Before you begin, identify whether your organisation already has an environmental policy, or has made environmental commitments in other policies or statements. An important question is whether you know how these policies came about and whether these commitments still hold. Commonly, policies have been developed in ad hoc responses to an external request or challenge, with little focused thought as to what the organisation is committing itself. If however, you are happy with an existing policy, check this against the requirements of ISO 14001 and EMAS (see table which follows in section 1.3.2).

If you are starting with a clean sheet, look at policies that other companies have produced to give you an idea of different styles. You may be able to request copies of policies from your customers, or find policies on company websites. Remember that your own environmental policy has to be relevant to your organisation, and reflect your main environmental aspects and impacts, so it is not a good idea to rely too heavily on someone else's.

Gather together other internal documents, brochures, and policies as these can also be useful when looking at (or for) a 'corporate style'. If you have someone who looks after marketing or public relations issues, it might be worthwhile getting them involved at this stage. They should be able to advise you on how customers might react or have been reacting towards environmental policies as well as give you information on style, layout, and the wording of any introductory statement about the organisation and its activities, products and services.

### **1.3.2 Contents of the Policy**

The environmental policy should contain a number of commitments, which management will support through their decisions and actions. If you have already identified environmental commitments that need to be maintained, then these should obviously be included in any revised or new policy. Beyond this, think about what else your organisation should be committing to with regard to its environmental performance. It can be useful to brainstorm ideas on the content of the policy in a group situation. To help you focus on this task, you might prefer to start with the stated requirements of ISO 14001, clause 4.2 (see table below) and build up from these.

<b>BS 8555 Phase</b>	<b>ISO 14001 Specified Requirements of an Environmental Policy</b>
Phase 1	Must be documented.
	Must be appropriate to the nature, scale, and environmental impacts of the organisation's activities, products, or services.
	Must include a commitment to continual improvement.
	Must include a commitment to pollution prevention.
	Must include a commitment to comply with all relevant environmental legislation and regulations.
	Must include a commitment to comply with any relevant 'other requirements' to which the organisation subscribes (e.g. industry codes of practice, contractual requirements, voluntary agreements or restrictions).
	Must provide the framework for setting and reviewing environmental objectives and targets.
Phase 3	Must be implemented and maintained.
	Must be communicated to all employees.
	Must be available to the public.
Phase 6	Must include a commitment to the continual improvement of environmental performance (EMAS).

When considering what 'must be appropriate to the nature, scale, and environmental impacts of the organisation's activities, products, and services', the wording in the policy must be made relevant to you. Also think beyond the boundary of your site, or the scope of your activities. Consider the impacts that occur through the supply of materials, and the use, consumption and disposal of your products and services.

A policy that covers all of the ISO 14001 requirements will suffice for an external assessment, but don't be put off adding additional commitments to the policy if you feel that this is appropriate. For example, you might want to commit to training and development of employees, to communicating regularly with customers and suppliers on environmental issues, or to working with local community groups to help improve the local environment.

You might be inclined to integrate the environmental policy with Quality and/or Health & Safety, but be mindful that achieving a readable document can prove difficult if it tries to cover too many issues.

### **1.3.3 Drafting Your Policy**

Once you have identified the style and content of your environmental policy, produce a draft version. Then check it again - it needs to be concise and written clearly, and give your intentions in simple, easily understood terms. It will eventually be available to the public, so avoid using technical terms and industry jargon. Then delete loose terms such as 'environmentally friendly' or 'industry best practice', as these are hard to define. Too long? Most useful policies can be contained on a side of A4 paper for ease of display and communication.

Keep the content of the policy at a fairly general level. Not only does this keep the size of the document down, it can also help prevent the policy becoming outdated too quickly. Remember that the final version of the policy will be communicated to all your employees, and probably to sub-contractors, suppliers, customers, and the general public as well, so you don't want to have to re-issue it too often. In addition to the cost and time involved, it doesn't send out a very convincing message if the policy changes regularly. Some policies (e.g. Health & Safety) will include specific management responsibilities for upholding the commitments made. Whilst this is required for the EMS documentation (see Phase 1, [Stage 1](#)), it is not necessary to include this as part of the policy itself. Again, if these positions or titles change, then this would require re-issuing the policy.

Once drafted, check that you are comfortable with the commitments made. The policy will provide the focus for the EMS and you will be audited against its contents, so ensure that you can uphold the commitments and substantiate any claims made.

Once you have developed your draft policy, show it to everyone in the organisation to get feedback and make any alterations as necessary. Once senior management is comfortable with the draft, insert the date and the issue status (e.g. Draft Version 1). Get a senior manager to sign the policy (ideally the MD) to lend weight to the commitments made – a signature can then be used as evidence that top management commitment has been gained for the EMS (a requirement of the final version of the policy in ISO 14001, EMAS and Phase 3 of BS 8555).

It is action that will make the policy contents become reality, so ensure that everybody internally is aware of why the policy is being developed, and what it contains. Make sure they understand not only what the words mean but the implications for them on a day to day basis. This can form an element of any general awareness raising activity you might undertake in [Stage 6](#).

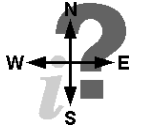
For Phase 1 of BS 8555, the policy needs only to be in draft form. It can (and probably will) be altered as your system evolves, but be prepared to finalise it in BS 8555 Phase 3. If you decide you want to issue the policy as a final version at this stage, ensure that it is dated and signed by an appropriate manager. In addition, if you want to meet ISO14001 and EMAS requirements, circulate it to all employees and make it publicly available.



### **Stage 1.3 Checklist**

- Existing environmental policies or commitments identified and assessed for relevance?
- Style and format of policy decided (Can you read it? Will it make sense to people who don't work for you?)
- Content of policy decided?
- Policy drafted on one side of A4?
- Policy circulated for feedback and approval?
- Final draft policy produced?
- Policy dated and issue status identified?
- Employees and key personnel made aware of the policy and its content?

## ***Developing Environmental Indicators***



### **Why**

Measuring something is not a replacement for managing it, but without getting some form of reliable feedback through units of measurement, tackling environmental issues can be a formless task that becomes difficult to justify in terms of time spent. Just as with all other areas of your business, performance data and indicators help keep everyone's eye on the ball, make sure that your efforts are contributing to the core of the business and can help when it comes to reporting internally and externally on environmental matters. Your policy already commits the company to continual improvement in environmental performance, so Environmental Performance Indicators (EPI), though not a strict requirement of ISO 14001, can maintain the business relevance of your EMS.



### **How**

- Identify key environmental costs and benefits to your organisation (e.g. waste, energy use, water use, other raw material use).
- Identify any other key concerns to your organisation or key interested parties (e.g. potential prosecutions, topics of complaint, areas of bad publicity).
- Develop measures of performance that are achievable (or already in use), and that accurately reflect the area of concern (e.g. litres of water used, tonnes of waste sent to landfill, kWh of electricity used, tonnes of carbon dioxide emitted). Correspond this with levels of activity (e.g. tonnes of production, km travelled, hours worked) where appropriate to provide comparable figures for the future.
- Develop simple indicators that are not confusing when you evaluate or communicate the information.
- Identify the actions (including provision of training and monitoring equipment) required to implement data collection. Think about exactly what data you need, where it will be collected from, how, when and by whom.
- Identify how indicator information will be used (e.g. auditing performance against targets, communicating performance to workforce, in company business reports, for training course materials, basis for preparing business case scenarios). This might affect your decision on the format in which to collect or present data.



### **Case Studies**

Stanbridge Precision, an automotive parts supplier from Luton, developed performance indicators based on the cost per manufactured part for the following environmental issues: electricity, waste, water, chemicals, cutting oil, gas oil, paper/packaging, Climate Change Levy and absorbent granules.

When these costs were added together, they provided a measure of the environmental costs of the business. This could then be associated with the manufacturing of a particular product. In this way, the environmental costs of the manufacturing process can now be compared product-against-product, as well as year-against-year for overall production efficiency. Within the first year, costs were reduced from a mean 0.8 pence per part to as low as 0.67 pence per part for the best month. If this rate were to continue for the whole year, £175,500 would be saved.

Communication of the performance indicators back to senior management allowed commitment to be maintained, as well as stimulating wider enthusiasm amongst the workforce.

Measurement of indicators in this way also allowed for the effectiveness of a recent scheme to replace a trichlorethylene wash with an isoparaffin wash to be assessed using environmental performance indicators.

## ***Developing Environmental Indicators***

### ***BS 8555 Achievement Criteria***

Robust evidence that data collection is being undertaken to address key environmental issues as appropriate to the organisation.

Robust evidence that the use of indicator information has been identified and planned.

### ***Practical Examples***

- Current data relating to performance of key environmental issues available for inspection (i.e. spreadsheets/documents describing waste tonnages or energy consumption data).

- Completed indicator profile records ([Appendix 1.4.1](#)).
- Completed summary of environmental areas for indicator development ([Appendix 1.4.2](#)).



### **Top Tips**

- Base your performance indicators on the main areas of environmental costs and benefits.
- Demonstrate cost savings or increased revenue at an early stage to help get and keep commitment at all levels.
- Identify any additional users of indicator information, so that their needs can be accommodated during the indicator development stage.
- Ensure that enough detail about your environmental performance will be provided to enable you to identify the root causes of costs or problems.
- Look for relative measures of an activity that might affect absolute data collected (e.g. Level of business activity, climatic conditions, production cycles, shift patterns).
- Use existing data where possible and appropriate (e.g. meter readings, invoices).
- Develop a profile for each indicator and guidance for use, to help ensure consistency and reliability ([Appendix 1.4.1](#)).
- Identify how data is to be collected and used (i.e. who does what and when).

### **References**

Envirowise publications: (available free from <http://www.envirowise.gov.uk/envirowisev3.nsf>)

- EG123 - [Speciality Chemicals Manufacture: Staying Competitive Through EMS](#)
- ET225 - [Waste Account](#)
- EN330 - [Measuring to Manage: How reducing waste can unlock increased profits](#)
- GG203 - [Monitoring VOC Emissions: Choosing the Best Option](#)
- GC162 - [Paint Monitoring Software Reduces Paint and Solvent Use](#)
- GG025 - [Saving Money Through Waste Minimisation: Raw Material Use](#)

Other:

ISO 14031: Environmental Management-Environmental Performance Evaluation (Guidelines)-available from BSI.

The principal aim of this Stage is to establish measures that will help you track environmental costs, benefits, and other important environmental issues. This will aid your environmental decision-making and communication and will also provide a basis for gauging your overall environmental performance using Environmental Performance Evaluation (EPE) techniques.

#### **1.4.1 Identifying Environmental Costs and Benefits**

During the baseline assessment ([Phase 1, Stage 2](#)), an assessment of environmental costs and benefits was encouraged, so if you did the work back in that exercise, you can use it as a starting point for this Stage. Although you can proceed to establish meaningful environmental indicators without having considered costs and benefits, it is possible that you'll overlook areas where quick savings can be made.

Why is this important? No matter what the size of the company, providing cost savings or increased revenue through environmental initiatives at the outset will assist you in securing and maintaining real commitment from management and employees alike. Like going to the gym, early gains keep everyone coming back for more.

If you do not have time or resources to investigate costs and benefits in detail; brainstorm the key areas of environmental costs (and benefits if applicable) for your organisation, even if you cannot easily get hold of any firm figures. This Stage will take you through establishing measures that will provide such information in the future.

#### **1.4.2 Identifying Other Key Issues**

In addition to environmental costs and benefits, it is possible that your organisation is faced with other environmental pressures that may require urgent attention. For example, pressure from your sewerage undertaker to improve the quality of effluent discharges, or customer requests for chain of custody records relating to products supplied. In such cases, concentrating solely on cost savings while ignoring such pressures would be tantamount to negligence, so consideration of such pressing issues needs to be built into this early indicator development stage.

#### **1.4.3 Summarising the Key Areas**

Once you have identified key environmental costs and other benefits, and other key issues and pressures, it will be helpful to summarise the key areas you want to focus on for measurement. [Appendix 1.4.2](#) provides a template, which you could use to summarise these key areas, and then record related data for each area. At this stage, you should keep things as simple as possible for obvious reasons; complexity does not always mean greater accuracy.

#### **1.4.4 Identifying the Users of Indicator Information**

In addition to your EMS Implementation Team, (in small companies, this probably means just you) there will be others within the organisation who will be interested in the information provided by indicators developed. For example, information on environmental costs and savings will interest both operations management and the finance department. In view of this, it will be useful to identify any additional users of potential indicator information produced, so that their needs can be accommodated in the indicator development.

As an example, solid waste can be measured and assessed in many different ways, such as:

- Tonnes-*Packaging waste data collator*
- Cubic Metres-*Waste Minimisation Team*
- Cost of Disposal-*Accounts Payable*
- Cost of raw material-*Production Manager*
- Cost of finished product-*Sales Manager*
- Number of Uplifts or Tips-*Yard Supervisor*
- Skips- *Production line operator*

Different users may require information presenting in different terms of measurement as shown by the examples above. More to the point, they may even be generating that information already, so talk to them to avoid re-inventing the wheel. Not all their information may appear environmentally related at first because they may be using it for quality or production purposes, but it's worth hunting around just the same. Big customers may even be monitoring material in enough detail that they carry data related to your company that is relevant – it doesn't hurt to ask.

#### **1.4.5 Identifying Required Information**

The next step (as indicated in [Appendix 1.4.2](#)) will be to identify what information you think will be needed to develop indicators against each environmental area identified. Remember, the indicators need to be able to help you in identifying potential cost savings, revenues, or other benefits, and the means by which to realise these. Therefore, enough detail will be required in the measures to enable you to identify the root causes of costs or problems.

For example, your organisation measures total fuel use and mileage for the organisation's service fleet, allowing you to calculate average overall fuel consumption. While of some use to benchmark against industry figures, the information is of little use if you are trying to identify where savings can be made. If you could break the information down by vehicle and driver, then it is more likely that you will be able to identify poorly performing vehicles and drivers. You can then decide on necessary action for improvement.

Let's take another angle on that example; measuring fuel use (which would be a key environmental cost area) and mileage (which describes the amount that a vehicle is used). By expressing fuel consumption as miles per gallon (mpg) we would be assessing fuel use directly in relation to the level of activity. In the international standard ISO 14031, which covers the whole subject of environmental performance evaluation, this is referred to as a 'relative' indicator.

Relative indicators can be applied to many different environmental areas. They will often provide a greater insight into the area than more straightforward measures of gross consumption or waste. In view of this, you should look for relative measures of an activity that affects the gross consumption figures.

What does all that mean? Time for another example; an organisation produces leather trim solid waste from the manufacture of shoes. The amount of waste can be affected by a number of factors, such as the quality of the hides, skill of the cutter, shoe design, shoe size, or machinery faults. However, the biggest factor is the number of pairs of shoes manufactured. In this scenario, the most important initial measures would be:

- Tonnes of leather trim solid waste, and
- Number of pairs of shoes produced.

Having said this, the other influencing factors mentioned might also be worth measuring or may prove more informative in further investigation. For starters though, stick to the obvious.

In developing these indicators, you can expect a few false starts and rethinks. Among other things, you might even find that the collection of some information could be too costly to justify. It's worth thinking about this at such an early stage of development - the costs of establishing new measures need to be balanced against the potential usefulness of the information that will be derived. Think it through before spending too much time or money. In some cases, it might be possible to identify a different measure that approximates to the first choice information, but is a lot cheaper to get at. For example, electricity used for lighting a showroom might not be discernible from electricity used in the administration and sales offices, but a measure of spent light bulbs and tubes will give an indication of electricity use. This sort of measure is referred to as a 'proxy' measure.

#### **1.4.6 Looking for Existing Information Sources**

When deciding on what you will need to measure to develop indicators for the areas you have chosen, it will be useful to have a good picture of what (if any) data already exists within your organisation (remember the other users above?). It is worth noting that information might exist, not identified as environmental information, and as such is collected and held across a range of departments. Some examples might be:

- ⇒ Data on resource consumption, such as material purchasing records, utility invoices and meter readings, compared with measures of business activity, such as units of production, or hours worked.
- ⇒ Financial information on environmental services bought in over a period of time, or related to a level of business activity.
- ⇒ Measures of environmental incidents, either by some form of severity rating, clean up costs, or legal action costs.
- ⇒ Fuel consumption per mile or kilometre, for vehicles.
- ⇒ Parts lifetime for machinery or vehicles, expressed against a unit of activity, such as the mile, or tonne produced, metre printed etc.
- ⇒ Financial investment in environmental projects per site.
- ⇒ Percentage carton fill in packing process.

Using existing information saves time and resources, as well as providing a ready made history of data and an accepted base around which to introduce new measures. On the down side, it is possible to spend too much time and effort trying to make existing data fit your requirements, especially if establishing new, precise measures is possible at little or no additional effort.

#### **1.4.7 Developing Potential Indicators**

[Appendix 1.4.2](#) provides space to record potential indicators which you will develop as you identify information needs for each environmental area. In order to get to know the nature of these indicators, you might find it a useful exercise to develop 'profiles' for each indicator. [Appendix 1.4.1](#) provides a template for the creation of these, and an example of a completed profile is given below. (Note that [Appendix 1.4.1](#) includes additional boxes to those shown in the example, which you might choose to use now or at a later stage).

Remember that this is only an exercise. By all means try it to see how useful you would find using the profiles for all your indicators.

Example Indicator Profile:

Mopper's Cleaning Services						
Indicator Reference	Set	Raw Materials	Indicator	3.1		
Indicator Details	<b>Quantity of detergent used per square metre of floor area cleaned.</b>					
Topic Area	Cleaning material consumption.					
Interested Parties	Managing Director. Operational management. Environmental management. Cleaners.					
Intended Purpose	To track detergent use and provide information to manage the reduction of detergent used, saving money and reducing environmental impacts.					
Data Required	Timing	Location	Scope	Unit	Reference	Type
Quantity of detergent issued	Weekly	By cleaner	Floor cleaner only	Litre	Product Code FC23/567	A
	Data Source	Gang supervisor: materials and equipment issues log.				
Floor surface area cleaned	Weekly	By cleaner	Hard floor surfaces only	Square Metre	N/A	C
	Data Source	Gang supervisor's weekly job report				
Additional Notes	Floor cleaner also used on work surfaces and tiled splash backs. These are not included in floor surface area calculations.					

*Key to type abbreviations:*

**A = Actual**, *R = Relative*, *E = Estimated*, **C = Calculated**, *P = Proxy*, *X = Conversion*

#### **1.4.8 Establishing Measures**

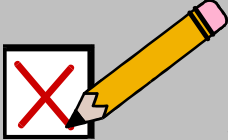
With the indicators developed and the information required clearly identified, it's now a good idea to think about how you are going to go about collecting the data. You may not need to establish new procedures and practices where you are using existing data, but it's worth doing with brand new indicators. Using the dreaded 'P-word' (procedure) does not mean that this has to be written down or formalised within a management system document structure, but you should have a means of ensuring that the data collected is reliable and consistent. You cannot get around the fact that the value of any data is affected by the reliability of the collection process.

#### **1.4.9 Using the Indicator Information**

Even when you have reliable data that's been turned into information, how do you know that the information that you have is useful? In the end, unless you can identify where business and environmental benefits can be realised, and how to get at them in terms of action, the exercise is pretty much a waste of time. It's true that you can pass the information to the 'identified' users and include it in regular performance reports, but if it isn't informing your

actions, then why would you bother? Beyond this, hard performance data can be used effectively to motivate individuals or groups, either as a result of strong performance or in response to below par results.

It's worth not skimping on this Stage if you are interested in pursuing EMAS registration (BS 8555 Phase 6). Environmental performance information will be required as part of the organisation's environmental statement, which is communicated publicly as part of EMAS. Under-developed indicators here would have to be revisited later, so you might as well aim to get things right first time round.



**Stage 1.4 Checklist**

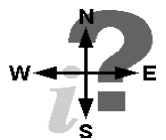
- Key environmental performance areas identified?
- Users of environmental information identified?
- Indicators and purpose defined?
- Information requirements identified?
- Indicator profiles developed?
- Data collection commenced?
- Plan of how indicator information will be used formulated?

### **Appendix 1.4.1. Indicator Profile Record**

Indicator Reference	Set		Indicator			
Indicator Details						
Topic Area						
Interested Parties						
Intended Purpose						
Data Required	Timing	Location	Scope	Unit	Reference	Type
	Data Source					
	Data Source					
Additional Information						
ISO 14031 Description (optional)						
Category		Characteristic				
Detail of Required Actions						
Resources Required						
Barriers			Opportunities			
Required Data, Collection and Communication Procedures						



## ***DEVELOPING AN INITIAL EMS IMPLEMENTATION PLAN***



### **Why**

The bigger the project, the greater the pressure of successful planning. Project management is not an art (black or otherwise) but a skill that can be learnt and applied by everyone. This is good news for those working with BS 8555 and ISO 14001 / EMAS, because a structured EMS implementation plan not only helps to bring a varied, interesting and wide ranging project together in one spot, it also helps to maintain your original objectives when they (inevitably) come under pressure. It can even be used to give backbone to wobbly management commitment when things get a bit unclear or have to compete for resources.



### **How**

- Identify the actions required to implement a full EMS to the required level (e.g. prepare site map, draft environmental policy, form implementation team, achieve Phase 4 of BS 8555, gain ISO 14001 certification).
- Identify any timescale targets (milestones) or aspirations for the EMS (e.g. Phase 3 of BS 8555 by this time next year, EMAS in two years).
- Develop an outline plan showing tasks and timescales.
- Identify responsibilities, specifying individuals or groups where possible.
- Check plans with the implementation team to ensure that timescales and assumptions are realistic (don't forget holidays for key personnel).
- Establish resource and time needs and estimate costs for these.
- Develop an initial plan that can be used for presenting and communicating your plans to management and operatives.
- Develop the plan so that you can use it practically for the management of the EMS implementation.
- Use the BS 8555 SME Workbook Progress Planning Spreadsheet (available as a free download from [www.theacorntrust.org](http://www.theacorntrust.org)) for meeting the above requirements in planning the implementation.
- Alternatively, think about using Appendix 1.5.1 of this workbook

**PAUL FABRICATIONS**  
High technology manufacturing



### **Case Studies**

Paul Fabrications, a metal fabrications company from Derby, used the Acorn Trust's Progress Planning Spreadsheet to assist with the planning of the implementation process. This Microsoft Excel spreadsheet-based tool allowed them to schedule resource and time demands in advance. They were able to assign tasks to individuals, set dates for completion and plan third party audits in advance. Implementation progress outpaced their initial expectations, due in no small part to the use of this tool.

The Progress Planning Spreadsheet also provided a running percentage of completion score for each Phase and for the whole EMS, to allow them to track their progress throughout implementation. This was used to communicate progress to management, and to key customers when questions about the project were asked. In particular, the tool was used to communicate progress to one of their key customers, Rolls Royce, who had expressed interest in the environmental performance of their supply chain.

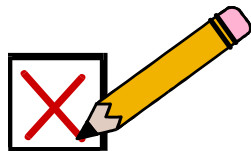
## ***DEVELOPING AN INITIAL EMS IMPLEMENTATION PLAN***

### ***BS 8555 Achievement Criteria***

A structured and realistic plan, detailing the timescales, and responsibilities for the achievement of stated EMS implementation goals.

### ***Practical Examples***

- Up to date Progress Planning Spreadsheet, in detail for the whole of Phase 1 and more generalised for later Phases.
- Completed Task and Timescale Planning Chart ([Appendix 1.5.1](#)).



### **Top Tips**

- Use the Acorn Trust's Progress Planning Spreadsheet designed for this purpose or your own equivalent.
- Build in existing practices and procedures where these help you to achieve identified tasks.
- Plan initial tasks in detail, later tasks more generally.
- Set a projected completion date for the project.
- Be realistic in your predictions, if you want the plan to be followed.
- Make a note of any assumptions made in calculating timescales or resource requirements.
- Establish milestones and measures to track progress against plans.
- Where resource requirements are identified, these should be costed in order to assist in the preparation of project budgets.
- Think of the plan as a tool for managing the project, communicating proposed actions, and gaining management commitment.

### **References**

Progress Planning Spreadsheet (available for free download at <http://www.theacorntrust.org/>).

### **1.5.1 Identifying Tasks to be Completed.**

The first step in planning is always a full list of what needs to be done. In the case of BS 8555, the majority of required tasks have already been identified for the entire process, providing you with a basis on which to build your implementation plan. Having said this, you should consider each task carefully, as some may not apply to your circumstances, and more importantly, you may need to undertake additional tasks depending on your starting point. You may find that you already have some elements of an EMS, so some of the tasks will already have been completed. Alternatively, other initiatives such as Quality Management Systems, Health and Safety Management, and Investors in People could well provide established solutions, so take time to find out what is already going on.

The BS 8555 Progress Planning Spreadsheet (or alternatively, [Appendix 1.5.1](#)) is intended to assist you with the preparation of the initial plan. Both tools have the key tasks already entered for you, and give you the chance to add further tasks if required. Planning many activities in detail at this early stage will be difficult for all but the most immediate actions. As such, you can use the planning charts to focus on the initial tasks in greater detail, and then highlight more general actions for future requirements, filling in the detail as things become clearer.

### **1.5.2 Identifying Timescales for the Completion of Tasks**

Remember, the initial EMS implementation plan could be used to secure further management commitment, so if it is, you will need some feel for overall timescales and costs. Whatever the circumstances, it is advisable to have a projected completion date for the project, to give credibility to the process and provide everyone with clear goals.

Using the Progress Planning Spreadsheet (or [Appendix 1.5.1](#)), you can now begin to attach timescales to the completion of the tasks. The timescales applied will depend upon the duration of the project, organisational planning, and the level of detail required to be shown (e.g. days, weeks, months, periods, etc). However, if you make time periods too long you might find that it becomes more difficult to allocate resources and maintain momentum.

It's always a matter of negotiation with those involved in any case, and the larger the organisation, the harder the negotiations become. Conversely, in smaller companies, it's all too easy to make commitments and then backtrack in the face of other problems without revisiting the project plan – result: nice plan, shame about the output.

In defining the time needed for each task, you will have to balance the available skills, resources and the requirements of the task itself. This is covered in [Phase 1 Stage 6](#) (Training Awareness and Culture Change Initiation) and it will probably be useful to consider the two Stages together, so read that one as well before you start to see how much applies to you.

Identifying the timescales for each task and comparing these with your overall completion date for the project will give you a lead on the level of resources and labour input required. As mentioned already, it will be difficult to plan in detail at this early stage so the main aim is to be realistic in your predictions. Some tips are provided below for consideration.

- Allow for some slippage in the time schedule, especially when planning over long timeframes. This will help to accommodate unforeseen events and problems.
- Build in realistic time when input, review, or feedback is required from other parties – it always takes longer than you think.
- Senior management, external parties, and geographically dispersed parties can often be less accessible.

- Allow time for communication between tasks as well as for the tasks themselves.
- Groups can reduce timescales if tasks can be spread between members, but can increase timescales if a lot of consultation is required.
- Allow for holidays, peak business periods, seasonally affected tasks, and restrictions imposed by financial periods.
- Allow time for training, awareness building, and gaining experience.
- Ensure that inter-dependent tasks are scheduled in sequence.

### **1.5.3 Identifying Milestones**

Identifying ‘milestones’ once timescales have been defined provides a useful way of measuring progress towards the implementation. Milestones can be identified on the Progress Planning Spreadsheet (or [Appendix 1.5.1](#)) with the use of symbols or colours.

Milestones are points in the implementation process that are seen as significant, especially while monitoring progress. Targets can be set for reaching milestones, which will often assist communication, motivation, and ensuring that the project comes in on time. Some examples of milestones are given below:

- The completion of the first draft policy – by week 3.
- The securing of initial management commitment – by September.
- The selection of a core EMS team – by period end.
- The identification of all aspects and impacts for production unit C – before annual shutdown.
- External recognition to Phase 1 of BS 8555 by the end of month 4.

Milestones are useful for maintaining momentum and focus through lengthy or complex tasks, and as such, some significant points in the process could be relatively minor when compared to others (e.g. drafting the environmental policy as opposed to certification to ISO 14001 at Phase 6). As accurate planning at such an early stage is generally difficult, the inclusion of milestones allows for flexibility in the exact timings of tasks during implementation, providing that the milestones are achieved.

### **1.5.4 Tracking Progress Against Plans**

Milestones help to plan the overall shape of the project but using progress related performance indicators helps *drive* the process. The Progress Planning Spreadsheet provides for each task or activity to be scored by achievement as outlined below;

- 0 = No activity initiated.
- 1 = Initiated (needs major work).
- 2 = Needs some improvement.
- 3 = Completed.

These scores provide information on percentage achievement for each task, and are flexible enough to be used across a range of functions or departments if desired. If the scores are regularly reviewed, this can provide a useful measure of progress, highlighting where additional effort or resource is required, or where praise and reward is worthy. The summary bar chart in the Progress Planning Spreadsheet can prove to be a very simple and effective visual means of reporting on progress to others not directly involved.

### **1.5.5 Summarising the Initial Plan**

The need to summarise the initial plan will depend upon the approach you have taken in developing it, the level of detail and complexity, and how you intend to use the plan during the project. The summarised plan should include details of responsibilities and individuals where possible, to give it credibility and to make sure there are no nasty surprises.

Well-presented plans can prove to be a very effective means of communicating complex and detailed information. The use of colour and symbols, in a simple and clear format, can enhance the effectiveness of such plans. However nice-looking you make it, make sure no-one falls into the trap of mistaking the plan for the project (a.k.a. Management by Flipchart).

### **1.5.6 Optional Consideration of Resource Requirements**

You'll also need to consider some resource requirements when creating your initial plan. This is likely to be relevant if you need an initial project budget in order to gain management commitment. Even where this is not the case, a feeling for some of the resource implications of your plans will undoubtedly prove useful. Accurately forecasting resource requirements through to completion will be difficult, so as with all financial planning, it will be important to note any assumptions you have made in your calculations. Like builders and car mechanics, make sure users of the information understand your figures are only an estimate.

[Appendix 1.5.2](#) presents a template that can be used to help identify and record resource requirements against each task (or group of tasks). In addition to this, the template provides space to enter any costings, and to make notes on assumptions. [Appendix 1.5.1](#) provides space to enter the names of responsible individuals or groups, labour input, and total resource costs.

To help you fill these out, some common considerations are listed below.

#### Labour Input:

- Expressed in 'person hours' or as a block of time (e.g. days, weeks, months, etc).
- Identification of specific individuals where possible.
- Identification of project managers, implementation team members, project administration and support staff.
- Identification (as far as possible).of labour input required for the implementation and operation of the EMS

#### Training and Skills Building:

- Time required delivering, or attending training, briefing, and knowledge gathering sessions should be accounted for.
- Specialist training or instructional input, from internal functions or external agencies.
- The hire or purchase of training and presentation facilities and materials.
- Travel costs associated with training and presentations.

#### Specialist input:

- Technical advice and support from within the organisation.
- Hire of consultants or specialist advisory services (e.g. environmental legal specialists, pollution monitoring services).
- IT and communications specialists.
- Government bodies, free or assisted support schemes.
- Academic research institutions.

Facilities and infrastructure:

- Monitoring and measuring equipment.
- Spill kits, bunds, interceptors, skips, settlement tanks.
- Pollution abatement equipment.
- Treatment equipment or plant.
- Communications infrastructure (e.g. intranet, e-mail, fax machines).
- Data handling and storage equipment and materials.
- Project and systems management facilities (e.g. computers, workstation, cabinets, etc).


Ancillary and support services:

- Administration support.
- Travel agents.
- Caterers.
- Calibration services.
- Equipment servicing and maintenance.
- IT support and data backup.
- Printers and publishers.
- Publicity agents and public relations departments.

Contingency provision:

- Finance to support remedial or unforeseen activity.
- Spare resources to accommodate unforeseen problems.

Where possible, resources identified against each task should be costed in order to assist in the preparation of a project budget. Working with the timescale plan developed earlier, this will assist in planning costs over the duration of the project. In smaller companies, where cash-flow is often the driving force behind any project, these templates, are still worth doing as they help to flesh out where your assumptions lie in terms of costs overall and where the financial sensitivities are. Note however, that at this stage cash flow problems or lack of funds may well require revision of the initial plan. This need not be the end of the world, as the whole idea of a flexible response and a phased approach to implementing an EMS is built into BS 8555.



**Stage 1.5 Checklist**

- Initial task and timescale plan for all of the key activities under your EMS implementation developed?
- Milestones (or targets) identified on the plan?
- Responsibilities and individuals identified on the plan?

## Appendix 1.5.1 – Task & Timescale Planning

Ref.	Tasks	By Who																	Cost	Notes
Phase 1	Commitment & Establishing the Baseline																			
1.1	Gaining & maintaining management commitment																			
1.2	Baseline assessment																			
1.3	Develop draft environmental policy																			
1.4	Develop environmental indicators																			
1.5	Develop draft EMS implementation plan																			
1.6	Training, awareness & initiation of culture change																			
1.7	Initiate continual improvement																			
Phase 2	Identifying and ensuring compliance with legal and other requirements																			
2.1	Identify relevant legal requirements																			
2.2	Identify 'other requirements'																			
2.3	Checking compliance																			
2.4	Ongoing compliance																			
2.5	Develop compliance indicators																			
Phase 3	Developing Objectives, Targets and Programmes																			
3.1	Evaluation of environmental aspects and impacts																			
3.2	Finalizing the environmental policy																			
3.3	Developing objectives and targets																			
3.4	Establishing indicators for environmental performance evaluation																			
3.5	Developing the environmental management programme																			
3.6	Developing operational control procedures																			
3.7	Launching environmental policy, objectives, targets and indicators																			

## Appendix 1.5.1 – Task & Timescale Planning Chart Cont.

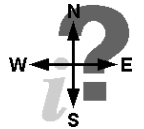
Ref.	Tasks	By Who																Cost	Notes
<b>Phase 4</b>	Implementation and operation of the environmental management system																		
4.1	Finalize management structure & responsibilities																		
4.2	Training awareness and competence, plans & records																		
4.3	Establishing and maintaining formal communication																		
4.4	Documentation and record keeping																		
4.5	Reviewing and testing emergency preparedness & response																		
4.6	Developing indicators for the EMS																		
<b>Phase 5</b>	Checking, Audit and Review																		
5.1	Establishing audit programmes																		
5.2	Correcting non-conformances and taking preventative action																		
5.3	Management Review																		
5.4	Improving environmental performance																		
5.5	Improving the EMS																		
<b>Phase 6</b>	EMS Acknowledgement																		
6.1	Preparing for external assessment of the management system (BS EN ISO 14001)																		
6.2	Review of baseline assessment																		
6.3	Review of implementation																		
6.4	Developing reportable information																		
6.5	Auditing for EMAS																		
6.6	The EMAS Environmental Statement																		







## ***TRAINING, AWARENESS AND THE INITIATION OF CULTURE CHANGE***



### **Why**

Everybody can see the benefit that a business can get from training, and awareness for everyone is a vital quality when it comes to something relatively new in the workplace like environmental issues. Using both of these factors, your employees will know what to do where their actions can prevent or lead to an impact on the environment. But 'culture change'? Most organisations either consider themselves too small to have an identifiable culture, or remain sceptical that it has any relevance to them. However, experience shows that cultures change management systems, not the other way round, so this section of the workbook helps you understand what it means for your organisation.



### **How**

- Assess the culture within your organisation with regards to environmental management – it may vary from department to department, or in smaller companies, from individual to individual. Think what you can do to change it where necessary (e.g. is it ignorance or apathy that is the problem).
- Assess how aware everyone is about the environmental issues/pressures facing your organisation including any environmental effects that might come from your activities, products and/or services.
- Inform everyone about your commitment to environmental management, and what this means in practice – don't forget contractors if they have a role to play.
- Good ideas lurk everywhere, so involve people in the EMS project at the baseline assessment phase if you can.
- How much training will you and others need in order to deliver this first Phase of BS 8555 and the project overall? Different people will need different levels of training and awareness according to their function, or their competence. It might be possible to use existing practices to assist in this (e.g. Investors in People - IiP), as the planning of training may already be conducted through IiP.
- Schedule awareness raising activity and specific training for individuals as identified from that initial analysis.
- Get feedback from everyone in the company, to assess how environmentally aware they have become. If any gaps are identified through this process, then take action to further increase awareness.

### **Case Studies**



Butters Group, a horticultural company from Spalding, used a digital camera to take photographs of areas of their site where environmental improvements were considered necessary. These photographs were used to provide evidence of any improvement initiatives carried out, when compared on a 'before and after' basis. They also proved useful for displaying on notice boards, as well as building into presentations and company marketing literature in order to raise awareness about the environmental issues facing their site. This kind of direct feedback to employees can be far more effective than merely talking about the issues. In addition, photographs provide great evidence for use during later audits.

## **TRAINING, AWARENESS AND THE INITIATION OF CULTURE CHANGE**

### **BS 8555 Achievement Criteria**

Robust evidence that the organization has planned and initiated awareness raising and environmental training within the organization as

### **Practical Examples**

- Completed checklist of cultural considerations ([Appendix 1.6.1](#)).
- Completed Training Needs Assessment template ([Appendix 1.6.2](#)).
- Completed Training Planner ([Appendix 1.6.3](#)).
- Completed Training Record Template ([Appendix 1.6.4](#)).

### **Top Tips**



- Training and awareness raising activity will be required from the earliest stages of the project.
- Awareness raising activity can take on many forms, and you should seek methods that will reach people and motivate them to participate in making improvements.
- Get people involved. Provide employees with guidance on how to make savings in the home through low and no cost environmental initiatives.
- It will be most important to target those people within the organisation who have the greatest influence over environmental issues or problems.
- Consider what other systems or procedures already exist to help you identify and plan training.
- Training activity will have great influence over the timing of tasks in the overall implementation, so plan ahead.
- Obtaining feedback will help you understand how the training focus or delivery can be improved, which will then help you to make the training more effective in future.
- Lead by example. There is no better way of raising awareness and commitment than to be seen to be modifying your own actions in order to improve the organisation's environmental performance.

### **References**

Envirowise publications (available free from <http://www.envirowise.gov.uk/envirowisev3.nsf>)  
011 - [Environmental Management Systems: Raising Awareness With Teams And Champions](#)

Successful management systems require knowledgeable, skilled and motivated groups of people. Well-planned and executed training and awareness raising can go a long way to delivering this, and as such, form a core element of any EMS programme.

Individuals will often be more confident and motivated if they are equipped with the right knowledge and skills to achieve. When an organisation's culture is not supportive of the aims of the EMS it will be necessary to take steps to change it; easier said than done, perhaps, but not without rewards for individuals and businesses.

Training and awareness raising activity will be required from the earliest stages of the project, and will need to be ongoing. This is in order to equip individuals and groups with the necessary skills and knowledge to enable them to perform new tasks, as the EMS develops.

### **1.6.1 Assessing your Organisational Culture**

Assessing your organisation's culture is likely to be subjective, given that you are close to it and will have built up certain perceptions. You may even never have thought about this aspect of your business, so using input from other parties to test your beliefs will help you conduct a more objective assessment. The smaller the organisation, the harder the culture is to spot while you're operating inside it – like asking a fish to define 'water'. In these cases, it's worth getting opinions from those outside the business but who know the organisation well.

Cultures can help as well as hinder. Recognising cultural restrictions at an early stage in the EMS development will, firstly enable you to develop an EMS that complements the existing culture, and secondly to identify areas where cultural change is desirable.

If it's your first attempt to articulate your culture, [Appendix 1.6.1](#) provides a checklist of cultural considerations against which you can make notes, identifying where the culture might affect the development of an EMS. From this, you can then identify initiatives that complement and capitalise on current culture, and those which seek to change culture.

### **1.6.2 Raising Awareness**

Much apathy and scepticism stems from a lack of knowledge or understanding about the issues under consideration. The environment is no different, and while general awareness of global and national issues is growing, few people relate these to their own circumstances, be this at home or at work. Headlines are hard to relate to your own backyard, and although many have heard the phrases, few understand how 'climate change', 'global warming' and 'greenhouse gases' are linked, let alone what their own contribution is to them.

Awareness raising needs to reach as many people within your organisation as possible:

- ✓ Raising knowledge and understanding about environmental issues which apply directly to your organisation. This needs to stress problem areas, and prompt individuals into thinking about how they can make a difference.
- ✓ Raising awareness of the organisation's approach to managing the environment, commitments made ([Phase 1, Stage 3](#)), ongoing initiatives, goals and targets ([Phase 1, Stage 5](#)).

The exact nature of awareness raising activity can take many forms. Choose methods that reach people and motivate them to participate in making improvements. The assessment of your organisation's culture might help you to identify the best (and worst) methods.

Some suggested awareness raising methods are as follows.

Presentations and workshops	Quizzes and competitions
Briefing groups	Discussion sessions
Posters	Web Pages
E-mail circulars	Appointed champions and working parties
Reporting through meeting structures	Involving people and inviting input
Newsletters	Visible environmental initiatives

One method that has often proved successful is providing employees with guidance on how to make savings in the home, through low and no-cost environmental initiatives. This raises awareness of potential savings in the workplace and starts to encourage a more environmentally focused culture to develop. Information packs can be obtained from the [Envirowise](http://www.envirowise.gov.uk) and 'Doing Your Bit' campaigns (see [www.envirowise.gov.uk](http://www.envirowise.gov.uk) and [www.doingyourbit.org](http://www.doingyourbit.org)).

### **1.6.3 Training**

Involving people in projects and initiatives is one of the best ways to get ownership and motivate, but in many cases you may need to give these people new skills and knowledge to enable them to contribute. It will be most important to target those employees who have the greatest influence over environmental issues first, given that training resources are often limited.

Once you have identified these key personnel, it will be useful to assess their current capabilities against new requirements. This is often referred to as a 'Training Needs Analysis' (TNA). A TNA can be as detailed as you decide is appropriate, though it is worth considering what other systems or procedures already exist which might help you, such as contained in the Quality Management System (QMS), or Investors In People (IIP). [Appendix 1.6.2](#) provides a basic TNA template that you might find useful.

From the completed TNA, and by cross checking it with your initial implementation plan developed in [Phase 1, Stage 5](#)., you can identify who needs specific training and when. Training activity can then be planned and arrangements made. In many cases, it's the training activity that will influence the timing of tasks in the overall implementation. [Appendix 1.6.3](#) provides a template for the planning and tracking of training activity.

### **1.6.4 Feedback**

Delivery of training and awareness-raising is not an exact science, and what works for one person or group may not work for another. In view of this, you need feedback from the audience or trainees, and you will invariably need to prompt them in order to get it. The rule is, don't ask for it unless you are prepared to do something with it.

To get the most useful feedback, don't just include evaluation forms with everything you send out, or ask for them at the end of every session. Evaluation forms can focus on obtaining feedback on the effectiveness and usefulness of the session as a priority, but they can also consider the method of communication, the facilities, and any other variable that might influence the effectiveness of the session. It might be necessary to provide assurances that feedback will be handled in strict confidence, but don't expect to be believed and be aware that some might give the response they think you want to hear.

Although these forms can be useful to a degree, you will only get people's immediate reaction, so it's best to follow these up with some kind of feedback gathering in a couple of weeks after the initial sessions. This will give everyone a chance to apply what they've learnt or at least think about it in the context of their work.

Ideally, you will want to obtain feedback in person (or through the presenter), so that you can discuss the points raised if necessary and clear up any misunderstanding. If you have to rely on remote feedback mechanisms which don't solicit an immediate response, set strict deadlines and be prepared to chase for responses.

Getting good quality feedback isn't a one-way process, or a one off. At this stage, you want to be maximising the opportunity to build relationships with key parties, the credibility of the project, and of the core EMS team. Acknowledging and initiating dialogue from feedback received is a good way of starting this process. This approach also ensures people have been properly engaged in the process, listened to and their opinions taken on board and valued. This will encourage them buy into the project as long as you have really been listening and not just going through the motions.

Keep the feedback channels open throughout the project, as this makes the EMS implementation team accessible and can provide valuable inputs. It also removes the need to establish new channels at each communication stage.

A number of techniques for getting feedback are listed below.

Delegate response sheet at sessions	Electronic discussion groups
Questionnaires sent to delegates after event	Project feedback telephone number or e-mail address
Telephone follow up	Regular project feedback forums
On job follow up assessment or audit	Suggestion boxes
One to one interviews	Representation through review meeting structure

Training is often costly, but if focused and delivered well, will pay for itself many times over in a short space of time. In a medium sized company, customised training delivered to your staff on your site is probably the most useful (in environmental terms), flexible (in terms of time) and cost effective (less money per head). In a smaller company, sending key individuals for formal training elsewhere may be more helpful. Either way, understanding how training focus or delivery can be improved, through feedback, will help to maximise the returns.

### **1.6.5 Training Records**

Strictly speaking, the requirement for formal training records does not occur until Phase 4 of BS 8555, however, it is good practice to establish and maintain a system for recording who has received what training or awareness-raising activity, when, and from whom. This provides you with a method by which you can update your TNA for each individual, ensure no-one gets missed out, keeps personnel records current for other users, and avoids wasted time and unnecessary annoyance through people repeating training sessions. Also, if refresher training or updates are required, the records will help you establish when these are due.

You might find that training record templates already exist under the Quality, Health & Safety, IIP, or other systems. If not, [Appendix 1.6.4](#) provides a template for recording training and awareness raising activity, deliverers, attendees, time, place, and date. It also provides space for any comments, questions raised, and a summary of feedback received. Insisting on attendee signatures is a good way of demonstrating attendance.



### **Stage 1.6 Checklist**

- Organisational culture considered and barriers identified?
- Awareness-raising activity identified and initiated?
- Training Needs Analysis (TNA) conducted?
- Training requirements planned?
- Record of training and communications conducted in place?
- Training applicable for your audience?

**Appendix 1.6.1 Checklist of Cultural Considerations**

<b>Variables in Organisational Culture</b>	<b>Notes Relating to EMS Development</b>
Management focus, i.e. sales, production, marketing	
Proactive or reactive	
Open or reserved	
Importance of traditions and history	
Level of autonomy or empowerment	
Relationships between management and staff	
Relationships between managers	
Extent to which people are target orientated and commitment to achieving agreed levels of performance	
Attitudes towards innovation	
Attitudes towards costs	
Attitudes towards investment	
Level of commitment and loyalty of staff to the organisation	
Elitism or tolerant development	
Attitudes towards risk	

**Appendix 1.6.2      Training Needs Assessment Template**

**Employee Name & Number:**  
**Department:**

Activity	Skill/Knowledge requirement	Level of required competence	Proposed skill/knowledge building activity	By when	Estimated cost

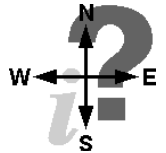
**Appendix 1.6.3 - Training Planner**

**Division / Department:**

<b>Delegate Name / Group</b>	<b>Skill/knowledge building activity</b>	<b>Deliverer/ trainer</b>	<b>Date &amp; time</b>	<b>Venue</b>	<b>Successful completion</b>	<b>Follow up details</b>	<b>Refresher due when</b>



## **INITIATION OF CONTINUAL IMPROVEMENT**



### **Why**

Anyone involved in quality management will understand the value of applying the principle of 'continual improvement' to an area of business. Not only does it recognise that your company is constantly changing and growing, so too are the needs of your customers and the dynamics of the market in which you function. In environmental terms, continual improvement is already written into a lot of environmental legislation – what is acceptable this year may not be next.

Getting into the habit of continually improving environmental performance will also ensure that benefits to the business keep coming and that everyone maintains their motivation to do better.



### **How**

- Review the findings of the baseline assessment – find the potential cost savings and other improvements and consider how you will achieve these over time, not just as a series of one-off initiatives.
- Brainstorm with anyone who has had experience of continual improvement activity (eg quality or continual improvement managers, production staff).
- Use existing guidance and case studies (see References section overleaf) to assist you in identifying areas for potential savings, and in prompting ideas for projects and initiatives.
- Ask other employees for ideas - you may be able to ask them directly, or by using a suggestion box scheme for communication.
- When you have all your ideas together, prioritise improvement programmes that give you the 'quick wins'. Keep a list of those to be used later on and check that they are not mutually exclusive.
- Develop indicators which enable you to track the effectiveness of any initiatives.
- Celebrate your successes and communicate these back to the workforce using your indicators. This is a great way of generating further employee involvement and raising awareness.

GREENFIELD WAY LIMITED



E C O L O G I C A L   H O U S I N G



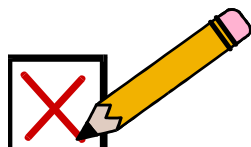
### **Case Studies**

Greenfield Way Ltd, a small construction company from Leicestershire, used posters designed by the workforce to encourage staff to identify ways of reducing environmental impacts. This campaign resulted in one member of staff arranging for a supplier to take back and reuse plastic caps that are supplied on pipework fittings. The supplier commented that it was the first time that anyone had requested this, but was happy because it reduced their own costs in purchasing the caps, as well as reducing waste from Greenfield Way. Management also made some commitment of their own with respect to initiating continual improvement at the head office, by replacing tungsten filament light bulbs with compact fluorescent lamps, which use less electricity and last much longer. They also began looking into ways of removing the need for the use of a crane during the construction phase, an area of the business where environmental risks were seen as highest.

## ***INITIATION OF CONTINUAL IMPROVEMENT***

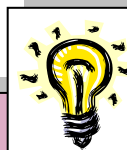
### ***BS 8555 Achievement Criteria***

Robust evidence that the organization has some initial continual improvement actions planned or ongoing



### ***Practical Examples***

- Keep photographs of any 'before and after' scenarios relating to environmental improvements.
- Retain invoices for any environmental investments.
- Retain records of minutes from meetings where environmental issues have been discussed. Record whether the issue has been resolved in minutes from subsequent meetings.



### **Top Tips**

- Look over the baseline assessment – ask yourself where improvements and savings can be achieved.
- Try and learn from case studies and information about how to minimise waste and improve your energy efficiency (use the case studies published by [Envirowise](http://www.envirowise.gov.uk)).
- Try and involve the whole organisation. Everyone can contribute to making environmental improvements.
- Ask other employees of the company where you can improve your environmental performance and save money (use meetings, award or staff suggestion box schemes).
- Set some initial goals and programmes that you can implement immediately, and make a record of ideas that you can do at a later stage (take early and obvious action to demonstrate commitment to environmental management).
- Get people to take ownership of initiatives, and build in incentives to achieve (e.g. prizes for best initiatives).
- Track your performance against goals and celebrate your successes (take photographs on a 'before and after' basis as a means of recording evidence of continual improvement-these photographs can also be used for marketing purposes, training course materials and on notice boards/newsletters).

### **References**

- Envirowise publications (available free from <http://www.envirowise.gov.uk/envirowisev3.nsf>)***
- GC144 - Profiting from Systematic Environmental Management
  - GC059 - Environmental Improvements Reduce Costs
  - GC049 - Environmental Management System Improves Performance

Continual improvement is an essential element of any EMS if the full range of potential cost savings and other business benefits is to be realised. Both BS 8555 and ISO 14001 recognise this and place a requirement for organisations to commit to continual improvement in their environmental policy.

### **1.7.1 Initiating Continual Improvement**

Looking for opportunities to improve things at the earliest stages of your EMS implementation can bring many benefits to the project as well as the organisation itself. The initial focus should be on low or no cost solutions to environmental problems or issues, especially where cost savings or revenues can be realised. Early action can:

- Realise tangible benefits to the organisation (e.g. cost savings, reduced risk of prosecution).
- Build project credibility.
- Assist in securing and maintaining management commitment.
- Provide savings or revenues for further investment.
- Provide an opportunity to get a range of people actively involved in the EMS.
- Provide motivation for both staff and management by realising quick wins.
- Provide strong evidence of your organisation's commitment to improving environmental performance, which can then be communicated to key interested parties (e.g. customers, local communities, regulators).

Although low and no cost solutions may not always be sufficient to tackle the most serious environmental issues at your organisation, it is worth taking these opportunities in the early stages of your EMS, as these will help you build the credibility of the whole project. The serious issues will need tackling, but be aware that large expenses early on (even if they pay back within twelve months) will tend to dampen enthusiasm and make people sceptical of further initiatives.

### **1.7.2 Using Information to Identify Initiatives**

Use information from your baseline assessment as the starting point for identifying opportunities for improvement. Further research, measurement and assessment might be required to get to the root cause of some issues. In addition to this, it is worth reviewing existing case study materials, which are widely available through organisations like [Envirowise](#) and [DEFRA](#). If you are a member of any trade associations or institutes, it is possible that they will have some useful industry specific guidance and information.

Local business support networks, like Business Links and Green Business Clubs can be a mine of useful information, local contacts and valuable insights. There may even be local environmental improvement projects of which you can be a part.

### **1.7.3 Getting People Involved**

Asking people from across your organisation to identify opportunities for savings is often an effective method for identifying continual improvement activity. The further benefit of this is that it will encourage employees and groups to take ownership of initiatives, getting them involved, and motivating them to find more solutions. It is possible that some of the savings generated through employee suggestions and initiatives could be fed back into their work environment to facilitate other improvements, or donated to local environmental projects as nominated by the individuals concerned.

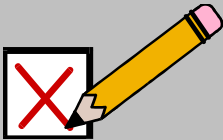
### 1.7.4 Setting Goals and Tracking Success

Once you have identified initiatives to start you on the route to continual improvement, it will be advisable to set clear goals or targets for achievement. Try and ensure that these are:

- ✓ **Measurable** – to allow you to track progress and clearly communicate successes.
- ✓ **Time specific** – to focus effort on achieving predicted benefits and meeting expectations of other parties.
- ✓ **Realistic**  
tough – achieving easy targets will have more benefit than missing targets in the early stages of the project. Success motivates, builds confidence and credibility.
- ✓ **Accountable** – if specific individuals or groups are given responsibility for achieving a target, then success is more likely. Incentives could be linked to achievement to further motivate.
- ✓ **Communicated** – to all relevant parties.
- ✓ **Supportive** – achievement of targets contributes to your overall aims and policy commitments.

Measuring progress against targets on a frequent basis will help you maintain focus on the task and enable you to identify any problems quickly. Regular reporting of progress can motivate those involved and enable them to take any necessary action. If quantifiable progress data is difficult to obtain, then think of different ways of demonstrating progress. The use of photographs at different stages of improvement projects has proved to be a highly effective way of tracking, demonstrating, and communicating progress and achievements.

Reporting on performance also allows you to raise the profile of initiatives and the EMS across the organisation, and celebrate successes. Where initiatives require ongoing attention to realise opportunities, schedule in periodic checks to ensure that procedures are maintained. This sort of checking, if recorded can be used as evidence of auditing, and might even be built into any audit system developed under Phase 5 of BS 8555.



**Stage 1.7 Checklist**

- Opportunities for realising benefits investigated?
- Initiatives identified and planned?
- Goals and measures set for initiatives?
- Initiatives implemented?
- Successes realised and celebrated?