

**So, you want ISO 14001 – Environmental Management****By Phil Chambers BSc, CMIOSH**

Many companies want to “do the right thing, environmentally”, but you don’t have to be certified to ISO 14001 for this. Guidance in publications like “How to be a Green Printer<sup>1</sup>” lead the way. However, having third-party assessment of your environmental practices, which is what you get with certification to ISO 14001, gives you a status which is recognised by most clients. It used to be that ISO 14001 companies were in the minority and this would make them stand out. Now companies are realising that they are going to be left behind without it. I know of many companies who have lost contracts because they are not certified to ISO 14001. Where their clients are those with a public image, such as banks, insurance companies, supermarkets, etc., then they almost invariably ask for ISO 14001. If they don’t, then tender documents will require you to go in to detail of your environmental management systems.

## Benefits

As a result being certified to ISO 14001, a company will:

- Have systems in place to manage environmental matters, gaining internal cost savings and improvements
- Be in a strong position to gain business where demonstrated environmental performance is a key part of the business

### **So what is ISO 14001 and how do we go about getting certification?**

ISO 14001 is an environmental management standard. Note that it is management standard, not a performance standard. So it is not a just matter of doing the right thing; it is also how you approach that in an auditable, sustainable and improving way.

Essentially there are two steps to gaining certification:

- Setting up and implementing management systems to cover the clauses in the ISO 14001 standard.
- Being audited by a UKAS-accredited certification body. This requires initial certification visits and then repeat visits to maintain certification.

Note that UKAS is the organisation that controls certifying bodies. Beware of companies who are not UKAS-accredited but who claim to be certification bodies. Any certificate will, at best, be of questionable value.

### **So how do I go about setting up and implementing management systems?**

Before we go any further, I’d just like to recommend that your documentation should be implementation-based. What I mean by this is that it should be written from the perspective of the users of the different systems and not look like semi-legal documents. I recommend the following:

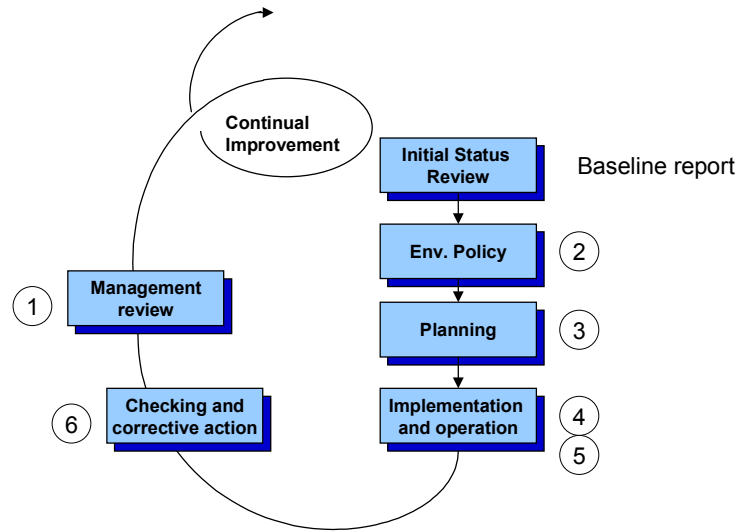
- Use flowcharts wherever possible. A system comprising a couple of pages of flowcharts is far more understandable than multiple pages of, “The Production Manager, on receipt of .....”. Flowcharts are just as acceptable to the certification body.
- Where text is necessary, write it in the form of an instruction to whoever is carrying out the action and possibly in tabular form. So, in one column you may have “Environmental Co-ordinator” and in the next “File waste transfer notes”
- Avoid text like “The Environmental Co-ordinator shall ....”. Sometimes it’s unavoidable, but minimise it.
- Be concise. You are not being judged on your weight of documentation, just that it covers the relevant ISO 14001 clauses and how well it is implemented.

The following pages show a typical format of an environmental system.

ISO 14001 shows this structure

**Baseline report and Planning**

These two overlap, because both enable you to identify the actual or potential environmental impacts and to plan how you will control them.



**Baseline report**

There is no defined content for a baseline study but SSS baseline reports cover such areas as:

- Company and site overview, including possible affects on, and from, neighbouring companies
- Sensitivity of the area with respect to schools, housing, sites of special scientific interest, etc.
- Existing environmental practices and systems, including raw materials, energy use, waste, etc.
- Accident and incidents, including any past incidents and provision for incidents

**3 Planning**

Aspects and Impacts

The other method of identifying impacts is an aspects and impacts assessment. This is similar in many ways to a safety risk assessment. Essentially, you identify each aspect of your business, say use of IPA, and then assess the actual and potential environmental impacts. For IPA, these may be:

To air: Discharge of a large quantity to air.

To water: Potential for spillage to run to drain and then to either sewer or stormwater drains

Some IPA retained in waste fount solutions

To land: Potential for spillage to run to land

Use a scoring system to assign scores for likelihood of the event and severity of the outcome. Then you will be able to list your impacts in descending order of significance. Define the measures to control the impact.

Legal Register

ISO 14001 states that you must maintain a register of all applicable legislation. I recommend that you create a table with the following columns:

Title of the legislation	Brief description	Applicable to your company?	Cross-reference to your system if it is applicable
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This can be a weighty document (typically 20 pages to cover environmental and health and safety legislation) as it covers all environmental legislation, only some of which will apply to your company. It breaks the implementation-based rule, but most people do not need to refer to it. Companies for whom SSS have provided the certification support and therefore the legal register will receive updates should legislation change.

Objectives

One of the requirements of ISO 14001 is to have, and to manage environmental objectives. Probably, the initial objectives will arise because of the baseline/aspects and impacts/legal register process. In later years, other objectives will arise, say a reduction in energy use.

Each objective must have some way of assessing if you have met the objective and a target completion date. If you use INTACT (see below) then the individual actions towards meeting each objective are linked to the objective and shows the complete story; very handy when it comes to your certification visits.

## 4 and 5 Implementation

### People's time

By far the most important part is getting the right people on board as early as possible. You will need someone to take the role of environmental co-ordinator; don't worry, it should not take up this person's time much but it is important to have someone who keeps things ticking over.

Secondly, management must be committed to the process. You will need to have the occasional management meeting, but dependant upon the scale of your operations, this may be as little as one every 6 months.

### Typical requirements from the legal register

Many companies are "doing the right thing" but we need to be able to show this. Typical areas where correction is required are:

- Hazardous waste is removed and treated by licenced waste companies. Fine, but you need up to date copies of their waste carriers licence (this has a finite lifetime) and their waste operators licence. You also need to keep the transfer notes and to cross-check these against the licence. A typical problem would be waste going to a different site to that shown on the licence.
- CTP waste rinse "water" runs to sewer. Again this is not normally a problem, but this is a trade effluent and you need either a discharge consent or a letter allowing you to do this from your sewerage undertaker. Note that rinse "water" may contain traces of developer or gum and suspended solids.

### Training

Many companies fall down when it comes to training records. People may be competent through experience or training, but you need a system to record this. I suggest that this system allows for both conventional training courses and an assessment of competence by somebody in authority in the company; you don't necessarily have to attend a course to become competent but you need some record that somebody has assessed that person for competence.

### Data to back-up the other systems

You will undoubtedly need a system to cope with spills. To back this up, you will need a plan of the drains on your site, identifying which run to sewer and which are stormwater drains. If a spill enters a drain then you will need to inform different people; your sewerage undertaker for the sewers and the Environment Agency for stormwater. Though it is not specified in ISO 14001, some companies actually paint a colour code on their drains. An informal standard is red for sewers and blue for stormwater.

## 6 Checking and corrective action

This is an essential part of the feedback loop that ensures that your system continues to run. You need two parts to this:

### Incident reporting

Set up a system so that all environmental incidents are reported, investigated and followed up. Encourage people to report near-misses.

### System effectiveness reviews

This is referred to in ISO 14001 as auditing, but this term means different things to different people and I therefore avoid it. You need to review each systems to determine:

- Is it fit for purpose? What are its objectives and will it achieve them if implemented properly?
- Is it being implemented properly? Are people aware of it? Is there an unofficial alternative system being followed? (What I call the parallel universe syndrome.)

You will need a schedule of effectiveness reviews and people competent to carry them out. Some certification bodies require a full set of reviews to have been carried out before certification. Whilst this may be excessive, you will certainly have to have reviewed all the key systems before certification.

You should also plan to review the operations at any of your key suppliers, say your supplier of hazardous waste treatment services.

## 1 Management Review

ISO 14001 requires you to have periodic management reviews and actually states the topics to be included. In the initial stages these may be quite frequent but it may be possible to reduce the frequency later. I would not recommend have a frequency any longer than every 6 months. Some companies like to hold them every month.

### Making it all palatable

Without a doubt, the stages of setting this up from scratch require quite some effort and companies take one of two routes:

1. Appoint someone internally and they work on this full-time
2. Use external sources to set up the systems and carry out most of the initial work and then use internal people to run the system in addition to their prime role

If route [1] is taken, then it is probably acceptable to have systems that require some effort to track any data. However, most companies do not have the luxury of having such a person.

If route [2] is taken, then provided that a sensible approach is taken to data management, the tasks to run the system should not be at all onerous.

Where SSS have provided the service to set up the system, then a computerised action management system called INTACT comes an inclusive part of the package. Options within INTACT enable is to be used to manage environmental, QA, health and safety and training records.

Essentially, INTACT replaces the majority of the paperwork and all other systems such as spreadsheets and word-processed documents to form an integrated action management system. All of the data, such as aspects and impacts, system effectiveness reviews, objectives,

### About the author



#### Phil Chambers BSc CMIOSH

Phil completed an apprenticeship with an engineering company, gained a Production Engineering degree and subsequently became a Chartered Engineer. After a career mainly with Moog Controls and Cosworth, Phil joined CRA in Melbourne where he immediately started work on the safety of molten aluminium in addition to his main management role. After a period concentrating on health & safety and environmental management, including molten aluminium operations in Australia, New Zealand and the USA, he returned to the UK in 1996 and formed Strategic Safety Systems Ltd. (SSS)

Phil is a Chartered Health and Safety Practitioner and was a contributor to the second edition of the Printers Guide to Health and Safety (available from HSE Books) and. Phil has carried out certification support for many companies, with certification gained to ISO 9001, ISO 14001, OHSAS 18001, FSC, FEPC and other standards.

In addition to certification support, SSS also provides health & safety and environmental services and computerised systems to manage these and other areas

Phil is married with four children and lists among his interests, the support of Gloucester Rugby Football Club.



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