



THE INSTITUTE  
OF CHARTERED  
ACCOUNTANTS  
IN ENGLAND AND WALES



Environment  
Agency

Sustainable Business

TURNING QUESTIONS INTO ANSWERS  
ENVIRONMENTAL ISSUES AND  
ANNUAL FINANCIAL REPORTING



# Sustainable Business

## An initiative from the ICAEW

Sustainability is now a central issue for business and society. Even among long-standing champions of sustainability, the urgency of the debate has moved beyond the concern for future generations to the here and now. In our market system we face a huge range of possible initiatives that could drive progress towards a sustainable world but limited time and resources to achieve that goal. Information is central to this. There is a vital role that the accounting profession can play in meeting the need for high quality information about the sustainable options available to us, the actions that these options call for and their impacts. Through the *Sustainable Business* thought leadership programme The Institute of Chartered Accountants in England and Wales (ICAEW) will engage with a broad range of partners to make its contribution.

We are committed to sharing knowledge and ensuring, that where appropriate, high-level points of view are, among other things, turned into guidance. *Environmental issues and annual financial reporting* is the first report to be published in the *Turning questions into answers* series of *Sustainable Business*. This was developed and published in partnership with the Environment Agency.

We welcome your input and discussion. If you would like to comment on the points raised in this report please contact us at [sustainability@icaew.com](mailto:sustainability@icaew.com) or call Richard Spencer on +44 (0)20 7920 8505.

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**ENVIRONMENTAL ISSUES AND**  
**ANNUAL FINANCIAL REPORTING**



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## ICAEW foreword

This report, prepared with the support of the Environment Agency, shows how the existing accounting and reporting framework, including the business review, is already capable of generating useful information about environmental performance, one of the key dimensions of sustainability. In our report *Sustainability: the role of accountants*, we identified the mechanisms used for enhancing sustainability and the ways in which accountants can contribute to the preparation, interpretation and reporting of required information and its credibility. It is my view that, for many businesses, annual financial statements will increasingly reflect the relationship between business and the environment.

Many larger companies now regard environmental issues such as climate change as a commercial opportunity just as much as a risk. Reputation can be enhanced by a policy of transparency, enabling the market to identify businesses that are more forward looking. Disclosure about research and development expenditure, for instance, could be linked to spending on environmental measures. As well as earning competitive advantage, the process of reporting, particularly the disclosure of management policy on any material environmental matters will help to avoid risks and drive internal change. Increased disclosure resulting from the business review requirement is therefore welcome a foundation on which useful information about environmental and social issues can be built.

The progress of the Climate Change Act has attracted considerable interest. Many commentators have welcomed the concept of reporting although debate continues about whether this should be voluntary or mandatory. Climate change is an important phenomenon of potentially greater significance than the current credit crunch.

While some businesses would welcome the certainty of a mandatory requirement, there are several hurdles to be overcome. If disclosure is to be meaningful and comparable, it will need to be accompanied by an explanation of the basis used. For instance, it will be necessary to decide the gases to be included (carbon dioxide alone or all six greenhouse gases identified under the Kyoto Protocol), the basis of calculation to be adopted, as well as the boundaries for reporting (such as including or not including supply chain emissions). Ideally for disclosures to be reliable and comparable, there would need to be an agreed global standard. However, convergence to such a standard would certainly take time and in the meantime, a period of testing and reviewing different models could prove beneficial. We recognise that there are pressures from major institutional investors for such carbon disclosure and we look forward to participate actively in establishing a basis for reliable reporting of emissions.

I hope that the guidance in this report will help preparers, users and auditors of annual financial statements to identify environmental issues of sufficient relevance to warrant disclosure to ensure that reliable information is provided. Stand-alone reports, such as those prepared in accordance with the Global Reporting Initiative, have a valuable role to play for many organisations and stakeholders, but their detailed nature often means that they are only read by a few. Mainstream statutory reporting, including information in annual financial statements, provides an opportunity to focus on key issues that affect business performance, including impacts and opportunities associated with the environment.

**Robert Hodgkinson**  
**Executive Director, Technical**  
**The Institute of Chartered Accountants in England and Wales**

## Environment Agency foreword

We are delighted to be partnering the ICAEW in the publication of this best practice report which is aimed at business accountants who prepare, use or audit the financial statements in statutory annual reports and accounts, or who advise or sit on the boards of UK companies and public sector organisations.

Environmental issues are of growing financial importance for business and accountants and are moving up corporate and consumer agendas for a number of reasons.

Around half of EU legislation is concerned with environmental issues and UK company law also has specific requirements for large businesses on the reporting and disclosure of environmental issues. The Stern Report on Climate Change demonstrated the growing financial significance of climate change to the world economy and UK business.

Everything business does is dependent on natural resources, our climate and weather patterns, and the eco-system services of the earth. Businesses need raw materials and use energy to provide consumer goods and services. The cost and financial value of these are crucial to business and the protection of eco-systems and services is vital for mankind.

Increasingly business investors, shareholders, and wider stakeholders are requesting additional and better environmental disclosures in statutory annual reports and accounts. Not being environmentally responsible has potential reputational costs for business. The media is paying closer attention to the environmental performance of companies. NGOs are quick to mobilise campaigns, using shareholder resolutions to drive issues up the corporate agenda. The Advertising Standards Authority has fined companies for misleading adverts making false environmental claims. UK courts are more frequently using custodial sentences for environmental crimes committed by company directors.

The Environment Agency is keen to encourage business to measure and disclose their environmental performance against targets using key performance indicators. The publication of the Defra environmental reporting guidance and KPIs for business was specifically designed to help businesses implement UK company law. It was developed with our support and provides a valuable tool, helping businesses to focus on their key environmental impacts.

We think the statutory annual financial reports should be the first source of key information on financially material environmental issues for shareholders, investors and other stakeholders. We also support the production of supplementary non-statutory voluntary reports by businesses that cover environmental issues for local communities and other stakeholders.

We believe that excellence in business accounting and publication of high-quality statutory annual reports and audited accounts is good for the economy and for the environment. The better a business is in solving its environmental impacts and issues the more successful and sustainable it will be, which is a win-win for the planet and society.

We hope this report will stimulate accountants and auditors to take a far more active role in assisting UK companies to address and disclose financially material environmental issues through existing accounting tools, standards, and best practice at their disposal.

I particularly draw your attention to the examples of good practice included in the body of this report and to the appendices:

- EU Environmental Directives, their implementation in UK law, and their importance and significance to business.
- Accounting standards, interpretations and exposure drafts with UK significance and their environmental implications.

We hope that this report stimulates discussion and debate and highlights areas where new accounting standards and more and better environmental disclosures are needed to better reflect the real value of environmental resources and the planet to business and mankind.

I commend it to you.

**Howard Pearce**  
**Head of Environmental Finance and Pension Fund Management**  
**Environment Agency**

## Executive summary

This report addresses environmental issues relevant to annual financial statements. The comments that follow provide a brief summary of matters dealt with in more detail in the report. For directors and report preparers, it focuses on what is required and how this is changing. It also considers the information needs of users. For auditors, the report provides a guide to tailoring the audit approach to accommodate environmental issues. Appendices 1 and 2 help the reader to identify relevant directives, regulations and standards.

### Reporting requirements

There is a steadily expanding body of UK legislation and regulation dealing with the reporting of environmental issues, much of which originates from EU directives. Over the last 20 years, the issue of directives has extended to cover key environmental areas, such as planning and assessment, nature conservation and biodiversity, emissions to air, water and land, and the disposal of waste, including certain hazardous products. As EU directives are implemented in the UK, businesses and their accountants need to identify and be aware of the implications of relevant regulations.

As a result of UK implementation of the EU Accounts Modernisation Directive (AMD), the Companies Act 2006 requires directors' reports to include a business review unless the business qualifies as a small company. Depending on its relevance to the company's business, the business review should contain certain information about environmental matters and their impacts on its prospects. Large quoted companies also have to report on environmental risks, policies and key performance indicators (KPIs).

The Accounting Standards Board (ASB) statement on the Operating and Financial Review (OFR), originally intended to have a life of its own, has acquired a new role in supporting the business review. In January 2008 the ASB has issued a press release reminding companies of their reporting obligations under section 417 of the Companies Act 2006 and commented that 'all of the enhanced business review requirements found in the Companies Act 2006 are already included in its Reporting Statement on Operating and Financial Review (OFR reporting statement) issued in January 2006'. It issued a table linking the legislative requirements with paragraphs in its reporting statement. This included environmental information captured under section 417(5)(b)(i) of the Act that corresponds with paragraphs 28(a), 29, 35 of the reporting statement. Many large companies may wish to continue publishing an OFR but, like the business review, the environmental disclosures will be treated as part of the directors' report.

Depending on the nature of a business, certain accounting standards and interpretations will be relevant to the treatment and disclosure of environmental issues in financial statements. For instance, the valuation and reporting of tangible and intangible assets, including the measurement of inventories, can be affected by environmental impairment. Businesses should account for their allowances and transactions associated with the EU emissions trading scheme. Financial provisions could be required for liabilities arising from costs of waste disposal, pollution, decommissioning and environmental contamination, and wildlife habitat restoration. Where environmental issues have a material impact, specific disclosures may be necessary.

Some environmental items may require special treatment due to their harmful impact. Irrespective of the size and value of an environmental item, its nature, societal importance, and impact on a company's reputation might be sufficient to be regarded as financially material. Where supply and disposal chain risks and impacts are material to the business they should be taken into account. If different reporting boundaries are used they should be stated.

The Climate Change Act 2008 includes new reporting procedures for greenhouse gas emissions. It requires the Department for Environment, Food and Rural Affairs (Defra) to publish – by 1 October 2009 – guidance on voluntary reporting of greenhouse gas emission. Defra must also undertake a review of the contribution reporting makes towards mitigating greenhouse gas emissions and climate change and has to publish a report containing these conclusions by 1 December 2010. By 6 April 2012 Defra must either make regulations under section 416(4) of the Companies Act 2006 to require directors' reports to include disclosures regarding greenhouse gas emissions or explain why no such regulations have been introduced. The effectiveness of such a requirement would be enhanced if a global standard, for reporting such emissions could be agreed.

## Implications for companies and report users

There are a number of ways that a company can become aware of significant environmental issues. This could be because of environmental events such as flooding or subsidence, or because of an increase in raw material or energy costs or from customer feedback. Equally, it could result from becoming subject to environmental measures introduced by government, supply chain pressure, trade-based information or internal sources, such as environmental managers or an environmental management information system. A number of procedures are available to reduce the risk of non-compliance with environmental laws and regulations.

Internal reporting systems should be capable of providing sufficient usage and cost information to enable the financial impact of environmental issues, both systematic and non-systematic, to be estimated reliably, using advice from specialists if necessary.

It can be advantageous to companies to exceed the minimum disclosure required in annual reports where there is a financial or reputational gains in doing so. For many businesses, there is a range of possible environmental concerns among stakeholders and some companies find it useful to instigate various forms of engagement to have dialogue and provide feedback to users on environmental issues. In this way, critical concerns can be managed and sometimes be turned to advantage.

Environmental risks can stem from natural hazards, man's own activities, such as those associated with climate change, or from the failure of engineered systems. These can all result in financial risks. There are benefits in integrating environmental issues with corporate risk management systems so that all possible issues are considered in identifying, measuring and managing risks. Environmental risk assessment involves a tiered approach, comprising risk screening, prioritisation and assessment of the nature and amount of risk. As well as downside risk, some environmental issues may also offer commercial opportunities and potential benefits.

Institutional investors are increasingly seeking a narrative discussion and quantitative information about environmental risks companies face and the steps being taken to mitigate those risks. The National Association of Pension Funds and Association of British Insurers (ABI) issue guidelines encouraging such disclosure. More generally, there is a need for consistency, comparability, relevance and reliability, and an integration of environmental information within annual reports.

Small businesses can be equally affected by environmental issues, although often lacking the resources to identify relevant regulations or devise suitable systems to monitor and control the effects. Help is available in the form of NetRegs, an on-line service provided by the Environment Agency, and through Project Acorn, a framework that offers five levels of certification for grading a small and medium-sized enterprise's (SME) environmental management system (EMS).

Where a company has significant environmental impacts, users of financial statements will normally wish to understand the entity's policies with regard to those issues. A competitive advantage is often gained from adopting a positive approach by giving, for example, investors, customers and employees information on the operation of an environmental management system or compliance with environmental laws and voluntary codes, and performance against annual targets to alleviate the impact of their operational activities, reduction of emissions and waste, as well as information on environmental improvements undertaken and the results of these.

Rating systems enable investors to benchmark company performance in relation to environmental and other criteria. Ratings are normally based on historical information although confidence is more likely to be enhanced if disclosures include forward-looking information. A balanced discussion of environmental performance can thus be turned to a company's advantage.

Credibility of environmental data incorporated in financial statements is enhanced by the operation of an effective system of internal control linking environmental matters with financial impacts. The information should also be reviewed by a person with appropriate experience. Users are likely to attach more importance to the disclosure of environmental information if some form of independent assurance is obtained.

## Guidance for auditors

In assessing the risk of a material error in financial statements, the auditor considers the nature of the business, including any environmental issues. Obtaining such knowledge is likely to involve discussion with management and consideration of a number of factors, including those illustrated as examples in Appendix 3.

Where the auditor considers that environmental issues give rise to the risk of a material omission or misstatement in financial statements, the additional steps necessary depend on the auditor's assessment of the risk to the reliability of the financial statements. The auditor may need to seek technical advice from specialists, including technical staff at the Environment Agency. It may also be necessary to review the process used to develop estimates, in which case the company's past experience in forecasting likely environmental costs and the provisions required could be relevant.

In cases where environmental issues present a significant risk to the reliability of financial statements, the auditor evaluates the internal controls over such issues and the effectiveness of their operation. The existence of an environmental information system or an environmental management system (EMS) can assist in this evaluation. Small businesses are less likely than others to operate such systems. Where EU Eco-Management and Audit Scheme (EMAS) verification or ISO 14001 certification has been obtained, this can provide evidence of effective internal controls.

While management is responsible for ensuring that an entity's operations are conducted in accordance with relevant laws and regulations, the auditor obtains a general understanding of the legal framework and how the entity is complying with it. Failure to comply often results in fines, penalties, prosecution or withdrawal of the entity's licence to operate, raising doubts as to its ability to continue as a going concern. Auditing standards provide guidance regarding the auditor's action in such circumstances.

Recognising and measuring the financial effects of environmental matters can be exacerbated by factors such as delayed or long-term impacts. However, some issues, such as flooding, can have immediate and on-going financial impacts. Sensitive matters should be considered material, irrespective of their size. Problems also arise from such events as pollution by a previous occupant or from a neighbouring site. The auditor's use of professional judgement in such circumstances is an essential part of the audit procedure.

Certain environmental issues are likely to be of concern when the auditor is reviewing their treatment in the financial statements. Participation in emissions trading schemes, for example, particularly in the early stages of adoption or when changes are made, should be considered, as should the treatment of environmental liabilities and taxes. The auditor also needs to consider the capitalisation of environmental costs and the recognition of environmental impairment.

Obtaining sufficient appropriate audit evidence on some environmental issues can be difficult. This is because of limited data availability, or the fact that it might be subject to less control than financial items. Nevertheless, where possible it should still be undertaken. Appendix 3 provides examples of procedures to obtain such evidence. Where litigation and claims relating to environmental issues can have a material effect on the financial statements, additional audit procedures are adopted.

The auditor is not required to report on the completeness of information in the directors' report or in documents containing audited financial statements but reviews such information for any inconsistency with the financial statements or the omission of information required by law or regulations. There are certain additional obligations with regard to matters reported in a business review or operating and financial review.

An auditor may consult with advisers or obtain expert assistance in relation to environmental items in the financial statements. In such circumstances, there are guidelines to enable the auditor to assess the quality of the expert's work and to consider its use as audit evidence and its impact on the auditor's report.

While the evidence available to auditors regarding the impact of environmental matters on financial statements can be excellent eg, flooding or pollution incidents, more often it may only be anecdotal and less conclusive. Formal representations from management may therefore be required where material environmental issues are observed or discussed but there is no related documentary evidence or in a number of other circumstances where confirmation is considered necessary.

Owing to the specialised nature of many environmental issues and the related laws and regulations, audit teams may require additional training to equip them to carry out their audit responsibilities in cases where the financial impact of environmental issues may be material. This would normally include the application of accounting standards and interpretations to environmental issues in specific areas, such as provisions, asset impairment, emission rights, hazardous products, and environmental liabilities.

It is important to distinguish between an audit and other types of an assurance process which may confer less credibility than an audit. While an assurance process is appropriate with regard to certain environmental information reported outside audited annual financial statements, this report is concerned with information reported in such statements and therefore within the scope of an audit.

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# 1. INTRODUCTION

'Sustainability, and within that the environment, is an important concern, if not the most important concern, for business and society today.'



Environmental impacts are of increasing importance and the drivers for reporting and assurance on such matters in annual financial statements are more than just a matter of compliance with the law. Climate change, resource use and waste, among other environmental issues, have moved up the corporate agenda and are now matters of strategic concern for many businesses.

## 1.1 Objectives

The integration of environmental issues with the financial reporting framework is not only logical from the point of view of stewardship, enabling users of financial statements to make economic decisions regarding environmental impacts on assets, liabilities, income and expenditure; it can also reveal business opportunities, as well as offering a more holistic approach to risk management. This could result in enhanced profitability, reputation and relationships with employees and customers.

The guidance in this report is designed to assist all organisations that wish, as part of good governance, to disclose information on environmental risks and opportunities in their annual financial statements. The reporting requirements for public and large companies are more explicit as a result of recent changes in company law, but much of the information in response to the questions set out in this report can apply to organisations regardless of size or sector. The ICAEW and the Environment Agency, as well as many other organisations, support the principle of greater transparency on strategies, value drivers and the use of appropriate indicators by management to improve the flow of information to all users, particularly institutional investors and capital market participants.

## 1.2 Target audience

We believe that this report will be of interest mainly to those involved with the financial statements of larger companies although smaller companies will probably also benefit. While the guidance is addressed to the private sector, the accounting principles generally applicable to most public sector bodies are similar to those in the private sector, although narrative reporting requirements can differ. Much of the guidance in the report should therefore be regarded as being applicable, at least in principle, to public sector bodies.

While accountants are likely to constitute the main audience, the report is also expected to be of interest to directors of companies and users of annual reports.

For auditors, the report poses a number of issues relating to the environmental matters that the auditor may need to consider, depending on the nature of the entity whose financial statements are subject to audit. It is offered as a source of reference rather than a mandatory checklist. The inclusion of Section 4 Guidance for auditors, together with Appendix 3 Audit process – examples and procedures, should not be interpreted as excluding auditors from the need to read the other sections, both of which are also relevant to the audit.

## 1.3 Approach

The report is intended to provide practical guidance on some of the points to consider in cases where environmental issues are relevant to the preparation or audit of annual financial statements. We have addressed the subject in three main sections:

- reporting requirements signposted;
- implications for companies and report users; and
- guidance for auditors.

Within each of the three main sections, the report poses a number of questions that are relevant, depending on the nature of the organisation and the view of management. Each of the questions is followed by information and practical guidance. This information is not a substitute for referring to the underlying regulations and the guidance is not intended to be prescriptive.

The three main sections are supported by two reference documents, included as appendices. They are:

1. environmental directives – financial accounting impacts.
2. overview of accounting standards, interpretations and exposure drafts with UK significance and their environmental implications; and

The report focuses on environmental issues within the reporting framework of annual financial statements, including business reviews and narrative statements such as operating and financial reviews, rather than stand-alone environmental, sustainability or corporate responsibility reports. It does not therefore seek to address social or economic matters, or questions of health and safety although these are significant and important topics for consideration.

## **1.4 Background**

This report builds on a discussion paper *Environmental issues in the audit of financial statements*, published by the ICAEW in February 2000. With support and encouragement from the Environment Agency, the scope has been expanded to incorporate guidance for preparers and users of financial statements, as well as directors of companies.

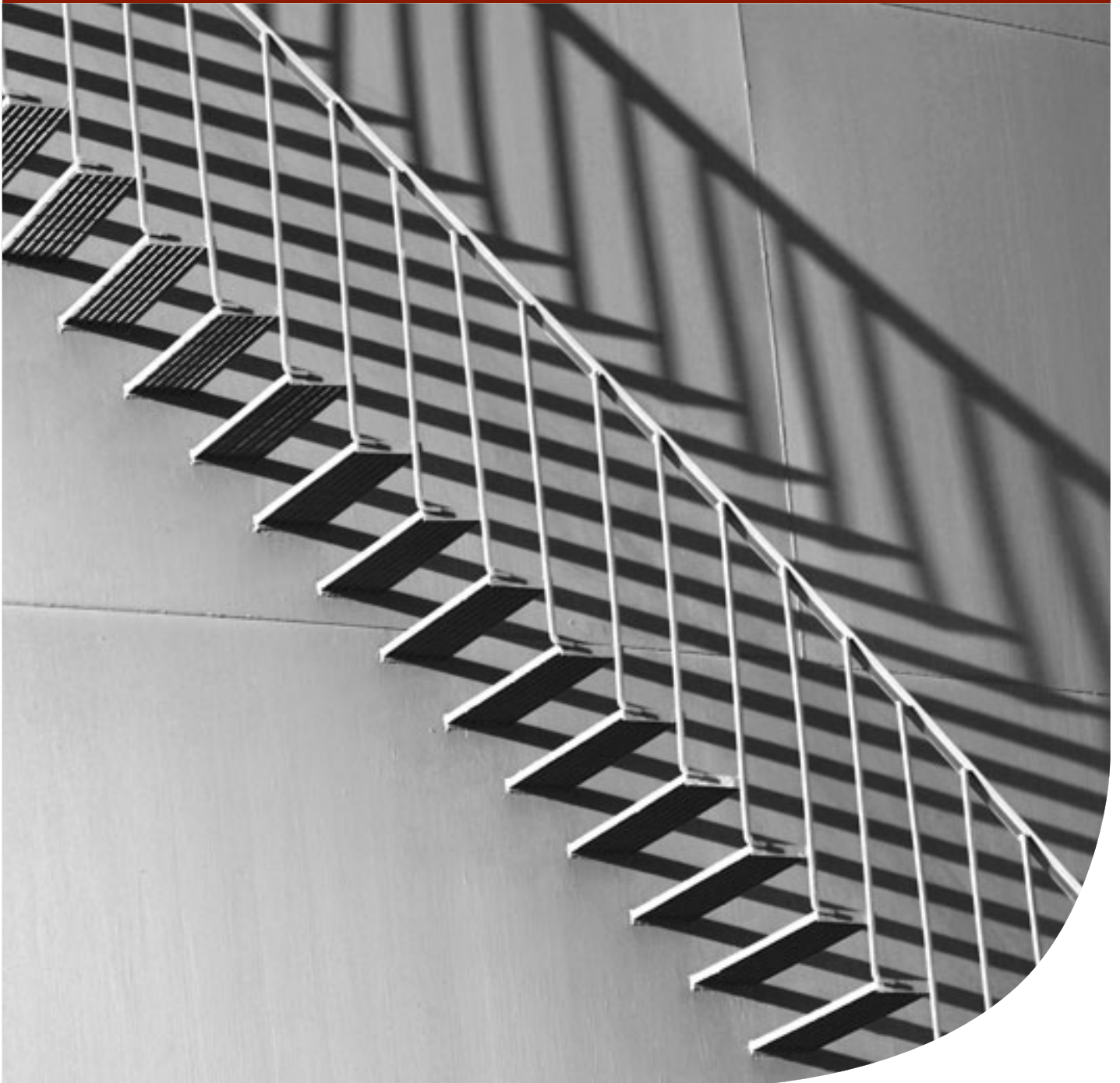
A considerable number of new regulations and requirements have been issued since the previous discussion paper was published. Auditing standards issued by the International Audit and Assurance Standards Board (IAASB) now form the basis for the framework of auditing standards applicable in the UK and Ireland. International Financial Reporting Standards (IFRS) are increasingly adopted by UK companies in place of financial reporting standards issued by the Accounting Standards Board (ASB).

On the legislative front, not only do we have the Companies Act 2006, with specific requirements for environmental disclosure in a business review, but there is also an expanding body of UK laws and regulations dealing with environmental issues, most of which originates from the EU directives.



## 2. REPORTING REQUIREMENTS

'There is a steadily expanding body of UK legislation and regulation dealing with the reporting of environmental issues, much of which originates from EU directives.'



Over the last 20 years, the issue of directives has extended to cover key environmental areas, such as planning and assessment, emissions to air, water and land, and the disposal of waste, including certain hazardous products. As EU pronouncements are implemented in the UK, businesses and their accountants need to identify and be aware of the implications of relevant regulations.

## 2.1 What are the principal legal requirements relating to environmental performance?

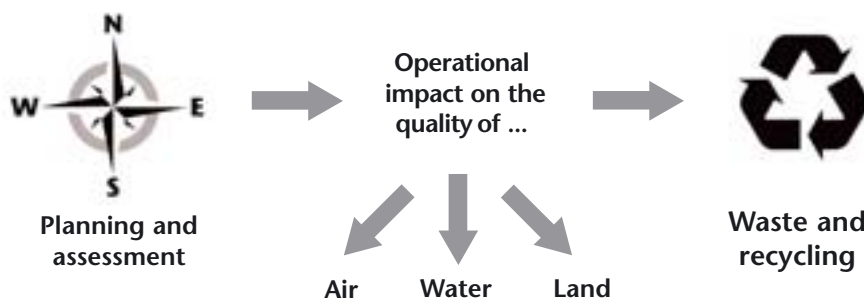
Almost every aspect of business has an impact on the environment. As a result, there is a wide variety of UK legislation covering environmental performance. The most relevant will be discussed here. We do not, however, seek to be exhaustive and, for greater levels of detail and coverage or for specific information, readers should refer to the Environment Agency (through, for example, its NetRegs website, [www.netregs.gov.uk](http://www.netregs.gov.uk)) or, where applicable, in-house or trade association sources.

UK legal requirements on environmental performance are largely driven by EU directives that address issues of planning and assessment, emissions to air, water and land, and waste disposal.

Taken together, these directives cover the full cycle of all business products and services and apply the principle of 'extended producer responsibility' (see Appendix 1 for more detail on directives and their impact). This was first articulated by the Organisation for Economic Cooperation and Development (OECD) in 1999 and is intended to promote the internalisation of environmental costs associated with products over their full life.

The directives can be grouped around three broad areas of the business process represented below.

**Figure 2.1: Areas covered by EU environmental directives**



### Planning and assessment

There are two EU directives that are specifically aimed at regulation of planning, the Environmental Impact Assessment Directive (85/337/EEC, subsequently amended by 97/11/EC) and the Strategic Environmental Assessment Directive (2001/42/EC). These directives are transposed into UK law by the Environmental Assessment of Plans and Programmes Regulations (2005) (the 'Regulations').

The Regulations aim 'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development'.

The directives are principally targeted at large public and private projects, such as motorways, airfields and nuclear power stations, which have to be assessed for environmental impact before authorisation. The Strategic Environmental Assessment Directive requires local authorities and other public bodies to ensure that environmental assessments are conducted on all land proposed for development.

The Regulations largely affect public sector organisations, but also apply to private sector organisations in the water, energy and transport infrastructure industries that are subject to Government regulation. However, the requirements of the Strategic Environmental Assessment Directive are best practice. As such, they are appropriate for many organisations that undertake large projects and can lead to long-term cost savings as well as good stakeholder relations.

In addition to these directives, the Habitats Directive (92/43/EEC) has a bearing on businesses during the planning and assessment phase of a project. The aim of this directive and its implementation in UK law is to protect biodiversity and, in particular, to provide a list of European protected plant and animal species. The directive requires licensing tests prior to planning permission. However, in accordance with the EU objectives of balancing environmental and business requirements, the processes for licensing are more streamlined than in the past.

## Operational impact on the quality of air, water and land

The Integrated Pollution Prevention and Control (IPPC) Directive 1996 gives a common set of rules across Europe for permitting industries and the best available techniques methodology for granting permits. Granting permits must take into account the whole environmental impact. The IPPC Directive is designed to prevent, reduce and eliminate pollution at source through the efficient use of natural resources. It covers emissions to air, land and water as well as impacts such as noise and vibration, energy efficiency, waste minimisation, environmental accidents and site protection. The UK enacted the directive through the Pollution Prevention and Control Act 1999 and associated regulations. Related directives deal with waste, hazardous waste and waste incineration. The UK has enacted these directives through a number of regulations issued since 1994.

The Air Quality Framework Directive seeks to set and maintain standards for air quality throughout the EU 'to avoid, prevent and reduce harmful effects on human health and the environment as a whole'. It is supported by other directives such as the Large Combustion Plant Directive 2001 and sets objectives designed to reduce air pollution and to assess and improve ambient air quality. The Large Combustion Plant Directive sets emission limits for sulphur dioxide, nitrogen oxides and dust. Related directives concern the emission of solvents, municipal waste incineration and the prevention of air pollution from new municipal waste incineration plants. The directives are being implemented in the UK through a number of regulations.

In 2003, the EC issued a directive establishing a scheme for greenhouse gas emission trading. The EU emissions trading scheme covers only carbon dioxide initially and is based on a concept of 'cap and trade' whereby emission allowances are allocated to companies in specific industry sectors. Emissions in excess of allowances held incur a fine, whereas surplus allowances can be sold, such trading being recorded under a system of national registries. The EU scheme is implemented in the UK through the Waste and Emissions Trading Act 2003.

The EC has consulted on the future design of the EU emissions trading scheme. Although the detail is still to be finalised, changes expected to take effect from the start of Phase III of the scheme include:

- an expansion to include other industry sectors, including aviation;
- greenhouse gases other than carbon dioxide; and
- the allocation of allowances by auctioning as an alternative to benchmarking.

The Environmental Liability Directive, issued in 2004, addresses the prevention and remedy of environmental damage. An organisation that has caused water pollution, damage to biodiversity or land contamination that creates a threat to human health is required to pay for the cost of repairing the damage. The directive should have been enacted in UK legislation by 30 April 2007 and has been the subject of two consultation documents issued by Defra. The regulations come into force in the UK on 1 March 2009, but only cover damage from emissions or events that took place following that date.

From April 2010 a new scheme called the Carbon Reduction Commitment (CRC) will start in the UK. The scheme is designed to promote energy efficiency and increase awareness within organisations about their carbon impacts and is designed to deal with emissions not captured by Climate Change Agreements and the EU Emissions Trading Scheme. The scheme has specific qualification criteria based on annual energy consumption. According to the Department for Energy and Climate Change (DECC):

'Organisations are eligible for CRC if they (and their subsidiaries) have at least one half-hourly electricity meter (HHM) settled on the half-hourly market. They also qualify if their total half-hourly electricity consumption exceeded 6,000 megawatt-hours (MWh) during 2008.'

DECC estimates that around 5000 organisations will qualify initially but add that the scheme is likely to affect around 20,000 businesses in the UK.

The CRC will operate in a similar way to existing emissions trading schemes, and participants will be required to purchase allowances to cover emissions from their energy consumption on an annual basis. Initially operating with a fixed cost of £12/tCO<sub>2</sub>, but by 2013 the price of allowances will be determined by market trading. Revenue from the allowances will be recycled back to participants, with a bonus factor based on performance. League tables of the participants performance will be published for public scrutiny.

A directive on the protection of groundwater against pollution caused by dangerous substances was issued in 1979. The Water Framework Directive, issued in 2000, covers surface, ground and coastal waters and seeks to manage river basin catchment areas in an integrated way. The resulting clean-up costs are borne by industries and farmers responsible for causing pollution. The Drinking Water Directive (1998) deals with the quality of water intended for human consumption. In the UK, these directives have been implemented through the Environmental Protection Act 1990 and a number of national and regional regulations.

Potentially hazardous chemical products are the subject of a regulation on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) 2006. The regulation, which entered into force on 1 June 2007 is being implemented in three stages, based on tonnage of chemicals. The first step begins in 2010, three years after the regulation came into force. Each manufacturer or importer will be registered and information collected about chemical substances, including those in imported materials, and evaluated for potential risk.

### **Waste and recycling**

The Landfill Directive issued in 1999 extends the reduction of waste to encourage recycling and to tackle the risk of polluting water and soil from landfill sites. It sets out a framework for waste management, requiring formal authorisation for waste disposal facilities, incineration and specific wastes and setting strict (and declining) limits on the quality and quantities of waste that can be disposed of as landfill. The UK has operated a landfill tax since 1996, with successive increases in the rate payable per tonne and has enacted the Landfill Directive through the Environmental Protection Act 2000.

A further group of directives concern potentially hazardous products and are of primary concern to specific industry sectors.

The End-of-Life Vehicles Directive, issued in 2000, is designed to improve the recycling of scrapped vehicles by restricting the use of certain materials, introducing targets and encouraging manufacturers to design vehicles that are easier to recycle. Manufacturers and importers are required to pay take-back and recovery costs for vehicles sold after 1 July 2002. The directive was implemented by UK regulations issued in 2003.

The Waste Electrical and Electronic Equipment (WEEE) Directive, issued in 2002, requires producers of electrical and electronic equipment to pay for end-of-life collection of their products. Where equipment sold after August 2005 is subsequently replaced, suppliers of the replacement equipment will bear the cost of waste. A related directive restricts the use of hazardous substances, such as lead, cadmium and mercury, in electrical and electronic equipment. UK implementation, following a consultation on the Restriction of Hazardous Substances (RoHS) Directive in 2006, is outstanding.

## **2.2 What recent EU directives and recommendations are likely to affect the reporting of environmental issues by UK companies?**

The EU Accounts Modernisation Directive 2003 (AMD) and Transparency Directive 2004 are part of the drive for a single European market. The Transparency Directive aims to harmonise the disclosure by EU-listed companies of accurate, comprehensive and timely information. It does this by establishing minimum content requirements for annual and interim reports to establish a high standard of reporting. The AMD is intended to increase the comparability between companies in the EU through a common reporting framework. To achieve this objective, the EU requires common financial reporting standards that are transparent, fully understood, properly audited and effectively enforced. The directive brings accounting requirements across Europe in line with modern international accounting practice and increases the reporting remit to take account of the growing demand for non-financial comment and analysis.

The AMD and the Transparency Directive require all companies, except for non-listed small companies, to produce a business review that meets requirements for reporting 'to the extent necessary for an understanding of the development, performance or position of the company's business'.

In particular, the business review must include information about:

'environmental matters (including the impact of the company's business on the environment),' and

‘information about persons with whom the company has contractual or other arrangements which are essential to the business of the company’.

It is the default position that such information should be included in the business review. If the review does not contain such information, it must be clearly stated, the implication being that environmental matters are not a significant issue for the company.

The requirement to include information about third parties has reporting implications for those organisations that have significant environmental impact within their supply chain.

The review is required to contain ‘where appropriate, analysis using other key performance indicators, including information relating to environmental matters and employee matters.’

Medium-sized companies are not required to produce such indicators but are strongly encouraged to do so as best practice that brings commercial benefits to the operation of the business.

The AMD was enacted in UK law through the Companies Act 2006.

### **2.3 What does UK law require companies to disclose about environmental matters in the annual report and business review?**

The Companies Act 2006 requires that:

‘a director of a company must act in the way he considers, in good faith, would be most likely to promote the success of the company for the benefit of its members as a whole, and in doing so have (amongst other matters) regard to ... the impact of the company’s operations on the community and the environment’.

In particular, a director must make decisions concerning the company’s compliance with the Companies Act requirement to report on environmental issues. This requirement is part of the need to include a business review within the directors’ report, ‘Unless the company is subject to the small companies’ regime, the directors’ report must contain a business review’, (Companies Act 2006).

A review of environmental disclosures in the annual reports of FTSE All Share companies published by the Environment Agency in October 2007 found that 98% of the companies reviewed addressed environmental issues in some way in their annual report for 2006/2007. However, disclosure of this information was often of a broad narrative nature rather than incorporating key performance indicators and was more frequently to be found in an operating and financial review than in a business review. Only 15% of companies reported quantified data in accordance with government guidelines, providing an absolute figure that applies to the whole company.

The publication of a business review has been mandatory for accounting periods ending on or after 1 April 2005. From 1 October 2007, new requirements have been introduced for quoted companies. Where companies wish to continue publishing a voluntary OFR, there will need to be a cross reference from the business review.

According to the Companies Act, the business review should contain:

- ‘(a) a fair review of the company’s business, and
- (b) a description of the principal risks and uncertainties facing the company.’

In the case of a quoted company it must:

‘to the extent necessary for an understanding of the development, performance or position of the company’s business, include:

- a. the main trends and factors likely to affect the future development, performance and position of the company’s business; and
- b. information about –
  - (i) environmental matters (including the impact of the company’s business on the environment) [Our emphasis],
  - (ii) the company’s employees, and
  - (iii) social and community issues,

including information about any company policies related to those matters and the effectiveness of those policies; and

- c. subject to subsection (11), information about persons with whom the company has contractual or other arrangements which are essential to the business of the company.'

On 1 October 2007, the additional requirement was introduced that, 'if the review does not contain information of each kind mentioned in paragraph (b) (i) (ii) or (iii) and (c) above, it must state which of those kinds of information it does not contain.'

For a large quoted company, there are three aspects to the environmental disclosures required in the business review:

- Risks and uncertainties.
- Policies and effectiveness.
- Key performance indicators.

The Companies Act does not provide any guidance as to how companies should meet these requirements. However, some relevant guidance is provided in the ASB statement of best practice Reporting Statement: *Operating and financial review* (RS 1), in which the supporting implementation guidance includes examples on spillage, emissions and waste. Non-mandatory recommendations for disclosure in the operating and financial review included a discussion 'identifying the principal risks and, in qualitative terms, the nature of the potential impact on results...'

The business review should recognise that environmental risks and uncertainties provide the opportunity for gain as well as loss. Gains might occur, for example, from enhanced reputation and sales as a result of an environmentally friendly product or from the possession of tradable allowances in excess of the levels required by operations. Losses might occur from fines for pollution, breach of licence or illegal waste activity, market disruption or collapse due to product failure and greenhouse gas emissions in excess of levels covered by allowances held.

The need to include KPIs is explicitly noted in the Act:

'The review must, to the extent necessary for an understanding of the development, performance or position of the company's business, include:

- (a) analysis using financial key performance indicators, and
- (b) where appropriate, analysis using other key performance indicators, including information relating to environmental matters and employee matters.

'"Key performance indicators" means factors by reference to which the development, performance or position of the company's business can be measured effectively.'

#### **2.4 Are there non-mandatory recommendations for environmental disclosure, for example, in the Accounting Standards Board's statement of best practice on the Operating and Financial Review?**

An ASB statement on the OFR has been in issue since July 1993, with a revised version issued in January 2003 to reflect improvements in narrative reporting. Although publication of an OFR was originally expected to be mandatory, in January 2006 the Government removed the statutory requirement, on the grounds that the disclosures provided would be similar to those in a business review required by the AMD. However, many large companies had been publishing an OFR for several years.

To provide guidance on best practice in preparing voluntary OFRs, building on consultation that followed an exposure draft, the ASB therefore issued RS 1 in January 2006, in which some of the key disclosures in an OFR were identified as:

- Directors' analysis of the business, with a forward-looking orientation.
- Information relevant to other stakeholders as well as to shareholders.
- KPIs, with detailed supporting information.
- Principal risks and uncertainties, including information about environmental matters.
- Policies on environmental matters and extent to which they have been successfully implemented.

The reporting statement RS 1 also contains extensive implementation guidance, including examples of disclosures on environmental spillage, carbon dioxide emissions, packaging-waste and noise infringements.

In January 2008, the ASB issued a table providing a link between the business review requirements and corresponding paragraphs in the OFR reporting statement RS 1. The linkage provides additional guidance on two relevant issues:

- As regards information about environmental matters and the impact of the business on the environment, including any policies and their effectiveness, RS 1 refers to the fact that the nature of the industry will affect the directors’ determination of an appropriate time perspective for reporting.
- Regarding key environmental performance indicators, RS 1 points out that an entity should provide information that enables members to understand each KPI disclosed, including its purpose, method of calculation, source of underlying data and any relevant assumptions.

As noted under 2.3 above, from 1 October 2007 quoted companies must ensure that their business reviews cover environmental matters. Those that do not will have to state as much. The Defra Reporting Guidelines on Environmental Key Performance Indicators are designed to offer guidance to companies reporting on environmental matters. They were issued in 2006 after the requirement for mandatory publication of an OFR was removed to help companies comply with the needs of the business review.

**Example 2.1: Biffa Plc Annual report and accounts 2007**

**Environmental management**  
 As a leader in our industry, we recognise that we have a responsibility towards the environment. Our operations can impact upon the global atmosphere, local air quality, water resources, biodiversity, and the local communities within which we operate. We therefore have a duty of care to protect and enhance the environment and that duty is firmly embedded in all our activities. We have strong environmental management systems in place to ensure that we fulfil our duty and responsibility towards the environment. Further, we are fully committed to meeting, and where possible exceeding, all relevant environmental and quality standards. We aim to achieve a constructive dialogue with regulators such as the Environment Agency as this is important to our business. Our management systems are structured to help eliminate any breaches of environmental legislation. At over 35 locations we currently operate to the ISO14001 management system, and we plan to expand this to a further 20 sites during 2007/08.

In the table below we have highlighted the number of enforcement notices and convictions for environmental breaches we received during the last three years.

	Environmental enforcement notices	Environmental convictions
2006/07	4	–
2005/06	6	–
2004/05 <sup>c</sup>	7	1

Throughout the environment review we have identified key aspects of our environmental performance.

We have determined these by reference to the environmental key performance indicators established by the Department for Environment, Food and Rural Affairs (DEFRA)<sup>7</sup> and our own internal environmental management systems. Further information on the wide aspects of our environmental performance is available at [www.biffa.co.uk](http://www.biffa.co.uk)

(Source: Biffa Plc, Business Review 2007, p31.)

The Defra guidance suggests appropriate ‘general’ KPIs and sector specific KPIs. It states that directors should try to balance KPIs that reflect their own, in-depth, understanding of their business with the need of users to carry out direct comparison with similar businesses. The document describes 22 direct KPIs. However, it is not expected that any one company would report on all of these. Analysis of business sectors suggests that around 80% of companies

are likely to have five or fewer KPIs directly applicable to them. The choice can be made from the 22 KPIs given in the guidance, which are chosen for their comparability and their concern with the key environmental issues of the moment including emissions to air, water and land, resource use, environmental fines and environmental expenditure. The guidance includes sector-based tables to help businesses identify the most appropriate indicators to publish. Guidance is also given on measuring performance of supply chains, giving indirect KPIs that cover upstream (supplier) impacts and downstream (customer) impacts. Defra & DECC have recently issued a joint consultation on draft guidelines for the voluntary disclosure of greenhouse gas emissions as required by the Climate Change Act 2008. These detailed guidelines will support the existing KPIs, and are due to be published in October 2009.

It is a key driver of the guidance that KPIs are consistent with Accounting Standards and that they will help businesses to both manage their environmental impacts and their related costs.

### Example 2.2: DS Smith Plc, Annual report and accounts 2008

<b>Environmental Performance Indicators</b>		
	2007/08	2006/07
<b>Energy consumption<sup>1</sup></b>		
Gigawatt hours	3,046	3,106
Megawatt hours/£'000 revenue	1.55	1.76
<b>Carbon dioxide (CO<sub>2</sub>) emissions<sup>2</sup></b>		
Scope 1 (direct) emissions – '000 tonnes	315	336
Scope 2 (indirect) emissions – '000 tonnes	481	474
Total Scopes 1 and 2 emissions – '000 tonnes	796	810
Kilograms/£'000 revenue	405	459
<b>Water usage</b>		
Million cubic metres	9.2	9.5
'000 cubic metres/£'000 revenue	4.7	5.4
<b>Waste management</b>		
<b>Total waste generated</b>		
'000 tonnes	348	394
Kilograms/£'000 revenue	177	223
<b>Waste sent to landfill</b>		
'000 tonnes	59	62
Kilograms/£'000 revenue	30	35
<b>Waste recycled<sup>3</sup></b>		
'000 tonnes	289	332
Kilograms/£'000 revenue	147	188
% of total waste recycled	83%	84%

Methodology: The Group is working towards collecting and reporting its environmental data in accordance with the guidelines specified by the Global Reporting Initiative and the Greenhouse Gas Protocol (GHGP), to the extent that this is currently practicable. The figures relate to all of the Group's wholly owned or majority-owned operations. Data on other aspects of the Group's environmental performance are provided on the Group's website.

1 Energy figures relate to usage of all fuels, including diesel for freight transport.  
2 CO<sub>2</sub> emissions have been calculated from the usage of all fuels, including for freight transport. As required by the GHGP, Scope 1 and Scope 2 CO<sub>2</sub> emissions are reported separately. Scope 1 (direct) emissions are those arising from combustion of fuel in installations or vehicles owned by the Group; Scope 2 (indirect) emissions are those arising from bought-in energy (i.e. electricity or steam) where the combustion has been carried out by another company. The 2007/08 Scope 1 emissions included 18,000 tonnes (2006/07: 18,000 tonnes) of CO<sub>2</sub> which were associated with the production of electricity which was sold to the grid from one of our CHP plants.  
3 Waste figures relate to waste generated by our operations; waste recycled includes recycling through agricultural use or landspread and energy recovery at our waste-to-energy plant.

(Source: DS Smith Plc, Business Review, p36.)

This example from DS Smith demonstrates good practice in identifying and reporting on environmental KPIs that are relevant to the business. The company also includes detailed notes on collection and reporting methodology.

## 2.5 Which international and UK accounting standards, abstracts and interpretations are most relevant to the treatment of environmental matters in annual reports?

The accounting standards most likely to be relevant to the treatment of environmental issues are those concerned with valuation, provisions and transparency of presentation.

### Valuation

The valuation of tangible and intangible assets, including the measurement of inventories, can be affected by environmental impairment.

## Tangible assets

In the case of tangible fixed assets such as land, plant and machinery, impairment often arises from an incident of contamination, physical damage, or non-compliance with environmental regulations. In such circumstances, the carrying amounts are reduced to the value in use or realisable value (IAS 16/FRS 15).

IFRS 3 *Business combinations* and FRS 7 *Fair values in acquisition accounting* require identifiable assets or liabilities acquired in a business combination to be measured at their fair value at the date of acquisition, which should, if appropriate, reflect environmental impacts.

### Example 2.3: First Group Plc, Annual report and accounts 2008

#### Laidlaw International, Inc. – Fair value exercise

In accordance with International Financial Reporting Standard 3 Business combinations ('IFRS 3'), the Group has performed an exercise to fair value the assets and liabilities of Laidlaw International, Inc. which was acquired on 1 October 2007 (See note 31). The key sources of estimation and uncertainty in relation to this are as follows:

- IFRS 3 requires the identification and value of intangible assets. The techniques used to value these intangible assets are in line with internationally used models, which require an estimate of future cash flows from the acquired business and an allocation of this to the intangible. These estimates directly impact the valuation.
- The fair value of the provision required for litigation requires the estimation of liabilities likely to arise on legal claims. It is performed with reference to both in-house and external legal advice and the likely payout across a number of legal claims. The actual amount settled in respect of these claims may be different than the amount reserved.
- The fair value of the provision required for any remediation work in respect of environmental matters relating to acquired property, requires the identification of environmental matters and the estimate of costs of remediation. This has been done with reference to work performed by external environmental consultants. The actual amount paid in respect of this work may be different than the amount reserved.'

(Source: First Group Plc, Notes to the consolidated financial statements 2008, p57.)

## Natural assets

The revaluation of inventories can also be affected by environmental factors such as physical leakage or deterioration, in which case the items concerned are written down to net realisable value (IAS 2/SSAP 9). Slow moving inventories may indicate overstocking and thus represent a wastage of raw materials.

Biological assets are either measured at their fair value, less selling costs, or, if fair value cannot be measured reliably, at their cost less any accumulated depreciation and any accumulated impairment losses (IAS 41 *Agriculture*).

### Example 2.4: Anglo American Plc, Annual report and accounts 2008

<b>Consolidated balance sheet</b>			
<b>as at 31 December 2008</b>			
US\$ million	Note	2008	2007
Intangible assets	13	3,006	1,556
Tangible assets	14	29,545	23,534
Environmental rehabilitation trusts	15	244	252
Investments in associates	16	3,612	3,341
Financial asset investments	18	3,115	4,780
Trade and other receivables	20	94	159
Deferred tax assets	26	258	474
Other financial assets (derivatives)	24	4	–
Other non-current assets		167	105
<b>Total non-current assets</b>		<b>40,045</b>	<b>34,201</b>

(Source: Anglo American Plc, Consolidated balance sheet 2008, p85.)

## Intangible assets

Intangible assets, which include greenhouse gas emission allowances, are subject to an impairment test on their carrying value if they exceed the recoverable amount from use or realisation (eg, through trading) (IAS 38/FRS 10).

Issued in 2004, IFRIC 3 *Emission rights* required an entity to account for emission allowances as intangible assets, recorded initially at fair value. Actual emissions give rise to a liability for the obligation to deliver allowances to cover those emissions (or to pay a penalty). When allowances are awarded by government for less than fair value, the difference is treated as a government grant. IFRIC 3 was withdrawn by the IASB in June 2005, as the accounting proved to be controversial due to the mismatch in the standards dealing respectively with intangibles, provisions and government grants.

### Example 2.5: Scottish & Southern Plc, Annual report and accounts 2008

#### (iii) Allowances and emissions

The European Emissions trading scheme (EU ETS) has been in operation since January 2005. The IASB withdrew IFRIC 3 *Emission Rights* in June 2005 and it has not been replaced with definitive guidance or interpretation for carbon emissions trading. The Group recognises carbon allowances granted as a current intangible asset at fair value at the date of grant and as deferred income and does not subsequently re-value the intangible asset. Carbon emissions liabilities incurred are recorded as a current liability. Carbon allowances purchases are recorded at cost. Up to the level of allowances held the liability is measured at the cost of purchased or granted allowances held. When carbon emissions liabilities exceed the carbon allowances held, the net liability is measured at the market price of allowances. Forward carbon contracts are measured at fair value with gains or losses arising on re-measurement being recognised in the income statement. The intangible asset is surrendered at the end of the compliance period reflecting the consumption of the economic benefit and is de-recognised at its original value. As a result, no amortisation is booked but an impairment charge may be recognised should the carrying value exceed market value.'

(Source: Scottish & Southern Plc, Notes on the financial statements 2008, p65.)

In December 2007, the IASB started its work on a new project on emission allowances. Despite its withdrawal, IFRIC 3 remains a valid, but illogical, interpretation of existing IFRS. However, its withdrawal means that, under the hierarchy for selecting accounting policies under IAS 8, other accounting models are acceptable. In addition to the method in IFRIC 3, two alternative methods of accounting for emissions are: cost of settlement approach based on initial market value; and cost of settlement approach where provision is only made for the cost of buying emissions rights not covered by allowances.

### Example 2.6: Drax Plc, Annual report and accounts 2008

#### '(I) CO<sub>2</sub> emissions allowances

The Group recognises its free emissions allowances received under the National Allocation Plan at nil cost. Any additional allowances purchased in the market are recorded at cost. The Group also recognises a liability in respect of its obligations to deliver emissions allowances. The charge to the income statement within fuel costs and the related liability is measured based on an estimate of the amounts that will be required to satisfy the net obligation, taking into account generation, free allowances allocated under the National Allocation Plan, market purchases, sales and forward contracts already in place, and the market price at the year end.'

## 14. Trade and other payables

	As at 31 December	
	2008 £m	2007 £m
<b>Amounts falling due within one year:</b>		
Trade payables	21.0	16.7
Other creditors	13.5	5.1
Accruals	259.6	71.5
Other tax and social security payable	0.9	0.8
	<b>295.0</b>	<b>94.1</b>

Accruals at 31 December 2008 include £158.3 million (2007: £15.9 million) with respect to the Group's estimated net liability to deliver CO<sub>2</sub> emissions allowances. Amounts due to trade creditors at 31 December 2008 represented approximately 21 days of average daily purchases through the year (2007: 22 days).

(Source: Drax Plc, Notes to the consolidated financial statements 2008, pp67 and 73.)

The examples from Scottish & Southern Plc and Drax Plc demonstrate different approaches to reporting carbon allowances and the resulting liabilities from their emissions.

Under UITF Abstract 27 *Revision to estimates of the useful life of goodwill and intangible assets*, where estimates of the useful economic life of goodwill or intangible assets are subsequently revised, the carrying value should be amortised over the revised remaining useful economic life. This is similar to IAS 38.

Guidance on the identification of impaired assets and the measurement of recoverable amounts is set out in IAS 36/FRS 11. Impairment of goodwill might arise through an environmental incident. The market value of purchased emission allowances will tend fall below their cost if there is a surplus of such allowances in the market. Recent volatility in the market price of carbon emission allowances has shown that such impairment is a real possibility.

### Provisions

Possible liabilities that give rise to a provision include waste disposal, pollution, decommissioning and restoration expenses. There may also be liabilities arising from participation in a specific market, such as vehicle production or the manufacture of electrical and electronic equipment. A provision is recognised when an entity has a present obligation as a result of a past event, it is probable that a transfer of economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation (IAS 37/FRS 12). It should be noted that the accounting standards on provisions are under review.

### Example 2.7: Johnson Matthey, Annual report and accounts 2008

#### 'Environmental Liabilities

The environmental laws of various jurisdictions impose actual and potential obligations on the group to remediate contaminated sites, both those currently owned and also, in some cases, those which have been sold. Johnson Matthey's environmental policies are set out on the company's website at [www.matthey.com](http://www.matthey.com). The group incurs costs annually in meeting these obligations and also maintains provisions for potential liabilities. If existing provisions are inadequate to cover any liabilities or the associated costs arising from environmental obligations this could materially impact the group's results.'

(Source: Johnson Matthey Plc, Business Review 2008, p24.)

## Example 2.8: BP, Annual report and accounts 2007

### 'Environmental expenditures and liabilities

Environmental expenditures that relate to current or future revenues are expensed or capitalized as appropriate. Expenditures that relate to an existing condition caused by past operations and do not contribute to current or future earnings are expensed.

Liabilities for environmental costs are recognized when a clean-up is probable and the associated costs can be reliably estimated. Generally, the timing of recognition of these provisions coincides with the commitment to a formal plan of action or, if earlier, on divestment or on closure of inactive sites.

The amount recognized is the best estimate of the expenditure required. Where the liability will not be settled for a number of years, the amount recognized is the present value of the estimated future expenditure.'

(Source: BP Plc, Notes on financial statements 2008, p113.)

The examples above illustrate how the two companies in question highlight the potential risks of their environmental liabilities. Johnson Matthey in particular draws attention to the material impact of inadequate provisions.

FRS 12 includes an appendix illustrating its application to various recognition issues. In particular, examples 2A and 2B are concerned with the accounting treatment of contaminated land and example 6 considers whether an obligation should be recognised in the case of new legislation requiring the fitting of smoke filters.

FRS 12 also refers to the specific example of an entity for which the cost of cleaning up a site at the end of its life is expected to be reduced by future changes in technology. The standard states that the amount of the provision to be recognised should reflect the reasonable expectation of technically qualified, objective observers, taking account of all available evidence as to the technology that will be available at the time of the clean-up. The standard emphasises that the development of completely new technology should not be anticipated unless supported by sufficient objective evidence.

An event that does not give rise to an obligation immediately may do so at a later date because of changes in the law. Examples include contaminated land where legislation is virtually certain to be enacted or where there is a constructive obligation due to an entity's published policy. In the case of a company that owns contaminated land, but has no present or constructive obligation for clean-up and thus no outflow of resources is probable, FRS 12 would prohibit the recognition of a provision. The asset would nevertheless be reviewed for impairment.

In addition, specific guidance is provided by an international interpretation, IFRIC 1, on the treatment of changes in existing decommissioning, restoration and similar liabilities; there are also international and UK interpretations regarding liabilities for the disposal of waste from the market for electrical and electronic equipment (IFRIC 6/UITF 45). Liabilities for disposal also arise under the End-of-Life Vehicles (ELV) Directive (2000).

## Example 2.9: Volkswagen Group, Annual report and accounts 2007

### 26 Noncurrent and current other provisions

€ million	Obligations arising from sales	Employee expenses	Other provisions	Total
<b>Balance at January 1, 2006</b>	<b>8,198</b>	<b>2,305</b>	<b>2,621</b>	<b>13,124</b>
Foreign exchange differences	-139	-14	-51	-204
Changes in consolidated Group	-2	-48	-76	-126
Utilized	4,004	849	695	5,548
Additions/New provisions	5,364	2,357	1,700	9,421
Interest cost	120	29	5	154
Reversals	385	100	335	820
<b>Balance at January 1, 2007</b>	<b>9,152</b>	<b>3,680</b>	<b>3,169</b>	<b>16,001</b>
Foreign exchange differences	-102	-5	5	-102
Changes in consolidated Group	0	6	99	105
Utilized	4,062	1,656	579	6,297
Additions/New provisions	5,445	1,093	2,011	8,549
Interest cost	41	-14	-4	23
Reversals	339	75	307	721
<b>Balance at December 31, 2007</b>	<b>10,135</b>	<b>3,029</b>	<b>4,394</b>	<b>17,558</b>

The obligations arising from sales contain provisions covering all risks relating to the sale of vehicles, components and genuine parts through to the disposal of end-of-life vehicles. They primarily comprise warranty claims, calculated on the basis of losses to date and estimated future losses. They also include provisions for discounts, bonuses and similar allowances incurred after the balance sheet date, but for which there is a legal or constructive obligation attributable to sales revenue before the balance sheet date.

Provisions for employee expenses are recognized for long-service awards, time credits, the part-time scheme for employees near to retirement, severance payments and similar obligations, among other things.

Other provisions include technical provisions (insurance) amounting to €115 million.

53% of the other provisions are expected to result in cash outflows in the following year, 39% between 2009 and 2012, and 8% thereafter.'

(Source: Volkswagen Group, Notes to the Consolidated Financial Statements 2007, p235.)

Volkswagen Group have identified and described the necessary provisions for their environmental commitments through the End-of-Life Vehicle Regulations (2003).

### Disclosure

In some cases, a transparent presentation will require specific treatment of environmental issues. As with other items, environmental items are reported in a way that reflects the substance of the transaction, determined by whether a transaction gives rise to new assets or liabilities (IAS 8/FRS 5). Exposure to inherent risks, including environmental risks, is evidence that an entity has an asset. Where environmental expense or income is a material item, it may require separate disclosure as part of the profit or loss from ordinary activities. The concept of extraordinary items has effectively been eliminated (IAS 1/FRS 3).

It is often necessary to disclose the accounting policy adopted where environmental issues have a material impact on the financial statements (IAS 8/FRS 18). For instance, where an entity is involved in emissions trading or has significant end-of-life liabilities for disposal of products such as vehicles or electrical and electronic equipment.

## Example 2.10: Severn Trent Plc, Annual report and accounts 2008

Key area	Objective	Basin	Measure	Measure	2007	2008	Quarter 2008
Financial	<b>Asset base enhancement</b>	ATD	<b>10</b> Capex (gross) vs final determination % <sup>1</sup>		2.7%	<b>1.7%</b>	Upper
		MAT	<b>11</b> Capital process quality (no defects per 100k) <sup>2</sup>		N/A	<b>0.03</b>	Upper
	<b>Manage trade debt</b>		<b>12</b> Debtor days <sup>3</sup>		37.5	<b>37.4</b>	Median
		MAT	<b>13</b> Opex vs final determination (UK GAAP) £m <sup>4</sup>		479.1	<b>480.9</b>	Median
	MAT	<b>14</b> Cost to serve per property £ <sup>5</sup>		226.93	<b>236.82</b>	Median	
Environment	<b>Minimise environmental impact</b>	MAT	<b>15</b> Pollution incidents (cat 1, 2 and 3) per 1,000 properties <sup>6</sup>		0.14	<b>0.11</b>	Upper
		MAT	<b>16</b> Sewer flooding incidents – other causes <sup>7</sup>		0.17	<b>0.21</b>	Lower
		PPS	<b>17</b> Sewage treatment works – breach of consents % <sup>8</sup>		0.00%	<b>0.00%</b>	Upper
	<b>Optimise use of resources</b>	MAA	<b>18</b> Raw water storage % <sup>9</sup>		90%	<b>92%</b>	Upper
		MAT	<b>19</b> Net energy use – kWh/M <sup>10</sup>		618	<b>608</b>	Median
		MLE	<b>20</b> Leakage ML/d <sup>11</sup>		524	<b>491</b>	Upper

Notes:

All measures are for the period to 31 March 2008, except as stated.  
 MAT = Moving Annual Total  
 QR = Quarterly Review  
 MAA = Moving Annual Average  
 NPR = Number of properties on register  
 MLE = Maximum Likelihood Estimate  
 PPS = Percentage of population served  
 ATD = AMP4 (Asset Management Period) to date

- As reported in June Return to Ofwat. Performance figures are provisional at this stage as the June Return will be submitted to Ofwat on 13 June 2008.
- Actual performance across all employees and agency staff. 2007 performance restated to include road traffic accidents.
- Performance based on quarterly survey of 10% of permanent employees.
- Measure for calendar year to 31 December 2007.
- Performance excludes properties billed by other water companies.
- Actual performance based on internal data.
- 2007 performance restated to include the impact of unplanned interruptions over 6, 12 and 24 hours. 2008 performance excludes impact of Summer 2007 flooding. 2008 performance is 184.5 if impact of Summer 2007 flooding included.
- Measure as at 31 March 2008.
- 2008 performance excludes impact of new pressure loggers installed in 2007/08. Including pressure loggers, 2008 performance is 0.455.
- Actual performance based on audited UK GAAP financial statements for the year ended 31 March 2008.
- Actual performance based on audited regulatory accounts for the year ended 31 March 2008.
- Restated to reflect all Environment Agency types of category 1, 2 and 3 pollution incidents.
- 2007 restated to reflect numbers of incidents as opposed to number of affected properties.
- 2007 restated to MLE leakage as opposed to DMA (District Metered Area) leakage.

(Source: Severn Trent Plc, Annual report and accounts 2008, p11.)

Here, Severn Trent Plc have included environmental performance measures alongside their key financial measures. They have included like-for-like performance for previous years for comparison purposes.

### 2.6 Is there anything special about how items are included or disclosed in annual financial statements?

Materiality of an item in financial statements is normally determined by reference to its size, nature and circumstances. Materiality is not the same as relevance. In the case of an environmental item, the same criteria apply, although the nature of an item and its impact on a company's reputation can be an overriding factor in determining materiality. In the case of discharge of a pollutant, for example, the carrying capacity of the receiving environment could be a critical factor. On the other hand, emissions in excess of a legal threshold may not necessarily be considered material. The materiality of an environmental risk would normally be interpreted in relation to its potential impact on the financial statements.

Reporting boundaries adopted should normally be the same as for financial reporting purposes. Inclusion of information relating to indirect upstream impacts, for example energy use or emissions incorporated in purchased electricity or transportation services, or indirect downstream impacts from products after sale, would be inconsistent with other information in annual financial statements. However, extended boundaries should be considered when assessing future risks, such as reputation risk. Any related provisions would be subject to the criteria in FRS 12/IAS 37.

Example 2.11: United Utilities PLC, Annual report and accounts 2008

Performance against KPIs			
	2007/08	Re-presented <sup>(1)</sup> 2006/07	% change
<b>Financial</b>			
Revenue from continuing <sup>(3)</sup> operations	£2,363m	£1,987m	18.9
Operating profit from continuing <sup>(3)</sup> operations	£663m	£642m	3.3
Underlying <sup>(2)</sup> operating profit from continuing <sup>(3)</sup> operations	£677m	£631m	7.4
Profit before taxation from continuing <sup>(3)</sup> operations	£478m	£502m	(4.8)
Underlying <sup>(2)</sup> profit before taxation from continuing <sup>(3)</sup> operations	£476m	£408m	16.7
Total dividends per ordinary share	46.67p	44.93p	3.9
Basic earnings per share from continuing <sup>(3)</sup> operations	47.3p	40.9p	15.6
Basic earnings per share from continuing <sup>(3)</sup> and discontinued operations	103.3p	49.4p	109.1
<b>Environment</b>			
Pollution incidents	9	9	
Water quality – mean zonal compliance	99.94%	99.92%	
Greenhouse gas emissions <sup>(2)</sup>	1.986mtCO <sub>2</sub> (e)	2.04mtCO <sub>2</sub> (e)	
Renewable energy generated	93.0GWh	78.6GWh	
<b>Employees</b>			
Employee engagement – employee opinion survey <sup>(4)</sup>	63%	–	
Health and safety – accident incident rate per 100,000 employees <sup>(5)</sup>	1,101	498	
<b>Customers</b>			
Water – relative efficiency banding <sup>(6)</sup>	Band B <sup>(2006/07)</sup>	Band B <sup>(2006/06)</sup>	
Wastewater – relative efficiency banding <sup>(6)</sup>	Band C <sup>(2006/07)</sup>	Band C <sup>(2006/06)</sup>	
Leakage – rolling annual average leakage	462Ml/d	468Ml/d	
Sewer flooding – number of properties on the at-risk register	434	469	
Overall customer satisfaction – water (in response to enquiries)	73%	68%	
<p>Notes:</p> <p>(1) See page 12 for explanation.</p> <p>(2) Incorporates increase in Defra's carbon dioxide emission factor.</p> <p>(3) This is a new measure designed to provide a more in-depth analysis than employee satisfaction.</p> <p>(4) Reflects the change in profile of our employees due to the sale of Vertex.</p> <p>(5) See page 12 for explanation.</p> <p>(6) 2007/08 assessment due to be published by Ofwat later in the year.</p>			

(Source: United Utilities PLC, Annual report and accounts 2008, p2.)

In the example above, United Utilities have made a decision to publish environmental KPIs that they believe are material to the business alongside their key financial KPIs at the start of their report and accounts.



### 3. IMPLICATIONS FOR COMPANIES AND REPORT USERS

'Environmental issues will affect companies in a variety of ways and will require internal reporting systems to enable management to assess their financial impacts adequately.'



There is an increasing awareness among business managers and report users of the importance of the potential impact on companies of environmental issues, such as climate change, greenhouse gas emissions, waste disposal, landfill site utilisation, pollution of land and water, resource use and recycling/reuse of materials.

### 3.1 How can a company identify environmental issues that may have a significant impact on its performance, reputation and relationships and address risks of non-compliance with regulations?

Most entities that are significantly affected by these issues will already be aware of the financial impact, although some underestimate the present or future impact. There are also cases where the information is not adequately communicated within the organisation.

#### Example 3.1: Cookson Group, Annual report and accounts 2007

##### 'REACH

The European regulation for the Registration, Evaluation, Authorisation and Restriction of Chemicals ("REACH") will have significant implications for Cookson business. REACH requires the registration of some 30,000 chemicals as it shifts the burden of proving chemical safety to industry, affecting the availability, cost and conditions of use of many substances. Cookson's chemical manufacturing businesses are taking steps to ensure that the necessary personnel understand the obligations under REACH and have the systems in place to meet them.'

(Source: Cookson Group plc, Annual report and accounts 2007, p29.)

Organisations often become aware of environmental issues through the use of tradable permits or 'green' taxes, such as the aggregates levy, landfill tax and climate change levy. Equally, they could be affected by one of the following three climate change instruments:

- the EU Emissions Trading Scheme, which targets big emitters of carbon dioxide;
- Climate Change Agreements with energy-intensive sectors; and
- the proposed Carbon Reduction Commitment (CRC) Scheme.

Announced in the Energy White Paper 2007, the CRC Scheme will start in 2010 and will apply to large commercial and public sector organisations whose annual half-hourly metered electricity use is above 6,000MWh.

Environmental issues and regulation have also given rise to new opportunities for businesses, such as those that have built up expertise in carbon trading.

#### Example 3.2: Drax Group Plc, Annual report and accounts 2007

##### 'Trading overview

Our practice is to sell approximately one-third of our power in the near-term markets and the remaining two-thirds in the liquid forward markets. We broadly match our power sales with corresponding carbon and fuel positions. As a result, annual profitability is influenced by past, present and future commodity prices.

Commodity prices at the end of 2007 were dramatically different to those at the start of the year and within-year volatility was very high. The three commodity prices that most strongly influence the electricity wholesale market of Great Britain continue to be international traded prices for oil, coal and carbon. During the year there was a 70% rise in international crude oil prices. In the same period, and in contrast to 2006 which saw relatively stable coal prices, international coal prices increased by 90%. The price for carbon under the EU Emissions Trading Scheme ("EU ETS") fell close to zero in 2007 whilst traded prices for carbon for delivery in Phase II of the scheme, which covers 2008-2012, rose by 45%.'

(Source: Drax Group Plc, Business Review 2007, p5,)

Internal sources should be regarded as the first source of information about significant environmental issues. If the organisation has an environmental manager, or a department responsible for such matters, any issues that are likely to have a significant impact on the entity's performance, reputation and relationships should be identified and reported promptly to senior management. Where matters relating to the environment are regarded as a specialist area, there needs to be good communication with the finance department.

Environmental issues can stem from beyond the normal financial reporting boundaries. Among others, supply chain issues for supermarkets are set to drive substantial changes in supplier companies. For example, to avoid a company's reputation being seriously damaged by sourcing its products in a way that harms the environment, suppliers are required to manufacture products sustainably and from sustainable sources. Monitoring supply chain performance, increasingly regarded as good business practice, will often alert an organisation to significant environmental issues that arise outside its normal reporting boundaries.

An effective internal reporting system, such as an EMS, should be designed to identify both systematic issues, such as liabilities arising from an end-of-life regulation governing the disposal of vehicles or electrical or electronic equipment sold by the entity, and non-systematic issues, such as liabilities for accidental pollution of land or groundwater. Systematic issues are more likely to be identified as part of the business process, whereas the control of non-systematic issues is likely to require an approach involving several departments.

### Example 3.3: Halma plc, Annual report and accounts 2008

#### 'Environmental management system

We are committed to developing and implementing an environmental management system (EMS) throughout the Group to measure, control and, where practical, reduce our environmental impacts. We have developed performance indicators that assist local management in implementing the policy and ultimately developing an EMS. The requirement for EMS and the related reporting has been rolled out to all UK business units, which represent over 50% of Group production facilities in terms of external turnover. All Group companies are encouraged to undertake ISO 14001, the international environmental accreditation, where warranted, and since last year Elfab Limited has obtained ISO 14001 approval. The requirement to implement an EMS will be extended to the rest of the Group in the medium term. In terms of revenue, currently 20% of the Group has ISO 14001 approval.'

(Source: Halma plc, Business Review, Annual report and accounts 2008, p33.)

External sources of information should also be considered. Government guidelines are given on a sector basis. However, information available by industry, for example, where environmental impacts are closely related to the core business, such as the extractive industries, chemical manufacturers or waste management companies. Articles in the trade press and news relating to other businesses within the same sector are another source of information that can alert the reader to significant environmental matters of concern.

To avoid the risk of non-compliance with environmental laws and regulations, leading to possible fines or penalties, management should put in place procedures to prevent and detect such infringements, for example:

- monitoring legal requirements and ensuring that operating procedures are designed to meet the requirements;
- implementing an appropriate system of internal control and regularly reviewing the controls over environmental risks;
- developing and operating a code of practice on environmental issues, such as accidental spills and the disposal of waste, particularly hazardous waste; and
- maintaining a register of significant environmental laws and regulations with which the entity has to comply and a record of complaints relating to environmental issues.

In the following example, United Utilities recognises the complexity of laws and regulations, acknowledging that non-compliance can occur.

### Example 3.4: United Utilities PLC, Annual report and accounts 2007

#### **'Environmental regulations could increase the group's costs and adversely affect profitability**

Various government environmental protection and health and safety laws and regulations govern the water, wastewater and electricity distribution businesses. These laws and regulations establish, amongst other things, standards for drinking water, discharges into the environment and the quality of electricity supply, which affect the group's operations.

In addition, the group is required to obtain various environmental permissions from regulatory agencies for its operations. The group endeavours to comply with all regulatory standards. However, historically the group has not been in total compliance and cannot guarantee in the future that it will be in total compliance at all times with these laws and regulations. Should the group fail to comply, it would face fines imposed by the courts or otherwise face sanction by the regulators.

Environmental laws and regulations are complex and change frequently. These laws, and their enforcement, have tended to become more stringent over time. Whilst management believes it has taken into account the future capital and operating expenditures necessary to achieve and maintain compliance with current and known future changes in laws and regulations, it is possible that new or stricter standards could be imposed, or current interpretation of existing legislation could be amended, which will increase the group's operating costs by requiring changes or modifications to the assets in order to comply with environmental laws and regulations.'

(Source: United Utilities PLC, Annual report and accounts 2007, p37.)

Regular communication with legal advisers will be helpful in keeping abreast of the environmental regulations and their impact on the business. Many law firms now have a specialist department dealing with environmental law and publish regular circulars explaining how EU directives are being implemented in the UK. There are also some firms that have particular expertise in the regulations surrounding carbon trading.

### **3.2 How can companies ensure that financial impacts of significant environmental issues are reflected in financial statements?**

The internal reporting system should be capable of providing sufficient information to enable the financial impact of environmental issues to be estimated with a reasonable level of reliability. Parameters should be set and impacts exceeding those parameters should be reported promptly to senior management. There needs to be regular communication between those responsible for environmental issues and the accounting staff, so that the financial implications of environmental issues are understood and any necessary action is taken promptly. Variances that are due to environmental factors should be identified at an early stage. Where an entity is involved in carbon trading, an effective system for measuring actual emissions and recording the trading of emission allowances is essential to enable period-end balances to be reliably recorded as assets or liabilities.

Management could well require advice from specialists, such as environmental advisers, engineers or surveyors in developing estimates and obtaining information for disclosure in the financial statements. For example, advisers may assist management in relation to the recognition of environmental liabilities, the impact of impairment and the assessment of greenhouse gas emission levels and the impact on related liabilities.

The reporting system needs to accommodate systematic and non-systematic issues in a way that their financial impacts are measured and recorded at an early stage. In the case of end-of-life liabilities, for instance, this will require the supplier keeping records of sales by product type, date of sale and year of manufacture, with an appropriate way of estimating the cost of disposal when the product reaches the end of its useful life. In the case of the purchaser, asset registers will need to be maintained on a detailed basis so that the supplier can be identified when the items are due for disposal.

Non-systematic liabilities would normally need to be measured on an individual basis, with the assistance of in-house or external expertise, depending on the nature of the expected liability. Where this arises, a record should be kept of the basis on which the estimate is made, the person who provided the estimate and the nature of any assumptions made, for example the remediation costs of cleaning up a similar site.

### **3.3 How can report users better understand environmental issues and influence corporate environmental performance?**

In the case of a company, shareholders and potential investors are the primary audience for the financial statements, although other users, such as lenders, suppliers and other trade creditors, employees, customers, government agencies, regulators and members of the public can also refer to the annual report for information about the company, including its environmental performance. While the content of financial statements is governed by law, companies commonly exceed the minimum disclosure required where there is a perceived benefit in doing so. For example, additional information about environmental issues may be provided in cases where there are known to be particular concerns and stakeholders could have an influence over the entity's reputation that would have an adverse effect on shareholder value.

Within the financial statements, the first source of information about any significant impacts of the business on the environment would normally be the business review (or the operating and financial review). This would usually extend to a description of the principal risks and uncertainties and, in the case of quoted companies information about policies and their effectiveness, with an analysis using key performance indicators (except for companies that qualify as medium sized).

For most businesses, there is a diverse range of possible concerns among stakeholders, just as stakeholders themselves form a varied constituency. Users will probably, therefore, have some difficulty in influencing a company's environmental performance. Equally, it is likely that an entity will find it difficult to identify or respond to the environmental concerns of all users. Some companies operate a system of stakeholder engagement as a means of identifying areas of vulnerability and reducing reputation risk. An approach of this nature may help to resolve concerns as well as influencing the nature and extent of environmental information provided.

### **3.4 What current or proposed initiatives could affect reporting on environmental matters and what steps can companies take to ensure that they are aware of their obligations?**

The principal current initiatives are the introduction of a business review and the proposed new reporting requirements under the UK climate change programme. From 1 October 2007, the Companies Act 2006 requires listed companies to report on their environmental impacts and to provide a description of the principal risks and uncertainties, including environmental risks. The content of a business review is discussed earlier under 2.3.

The business review is seen as part of the directors' report and does not need to be a separate section of the annual report. Some organisations have continued to publish an operating and financial review, on which the ASB guidance, previously issued as a reporting standard, has been converted to a voluntary statement of best practice. In the meantime, comparability is not made any easier for users due to different forms of presentation. The IASB proposals for a management commentary, currently being developed, might lead to a further variation in the disclosure of environmental matters.

In May 2007, the Aldersgate Group, a group of organisations, individuals, companies and charities, issued a report *Carbon costs: Corporate carbon accounting and reporting*. The report found that few FTSE 350 companies have credible carbon reporting mechanisms in place and that, where mechanisms do exist, comparisons are not possible because emissions are calculated in a different way. Emphasising the absence of an agreed model for carbon accounting and reporting, the report calls for a common reporting standard. It takes the view that the disclosures should be included in company 'hard copy statutory annual reports and audited accounts' as well as electronic reports. The Aldersgate Group also called for the Climate Change Act to ensure that companies report carbon emissions and other factors relating to climate change.

The Climate Change Act, which received Royal Assent in December 2008, is primarily concerned with setting and managing targets to reduce carbon dioxide emissions, under a legal framework that will impose binding limits. The Act also contains powers to introduce new trading schemes through secondary legislation, such as the Carbon Reduction Commitment.

Under the requirements of the Act Defra is required to publish voluntary guidelines on the measurement and calculation of GHG emissions by October 2009. The Secretary of State is also required, through the Companies Act 2006, to make regulations for those companies publishing a directors' report to include mandatory information on their greenhouse gases by April 2012 or explain why no such regulations have come into force.

The European Commission has published revised guidelines for monitoring and reporting greenhouse gas emissions under the EU Emissions Trading Scheme that apply from the start of Phase II of the scheme in January 2008. The revisions include a relaxation for small installations and guidelines for operators using a continuous monitoring system.

Accounting for sustainability is the subject of a report issued in December 2007, following an initiative by the Prince of Wales. As well as seeking to embed sustainability in an organisation's decision making, the continuing project includes the development of a 'connected reporting framework', intended to give a more complete picture of overall performance. The framework comprises five key elements:

- an explanation of how sustainability is connected to strategy;
- five key environmental indicators;
- other information about material impacts on sustainability;
- development of industry benchmarks for KPIs; and
- supply chain/value chain sustainability impacts.

The environmental indicators proposed relate to polluting emissions, waste, water usage, energy usage and significant use of other finite resources. The connected reporting model is seen as a voluntary element of corporate reporting, intended to remedy some of the defects of audited financial statements.

As the business world increasingly understands its environmental impacts and recognises that ecological balance is a necessary condition for sustainability, so putting a value on biodiversity and ecosystem services is gaining significance. For example following the environment meeting in Potsdam of the G8 plus five newly industrialised countries in March 2007 the European Commission and the German Federal Ministry of the Environment initiated a review of the economic benefits and costs of biological diversity in The Economics of Ecosystems and Biodiversity (TEEB) project.

March 2008 saw the publication of a report by the United Nations Environment Programme Finance Initiative entitled *Biodiversity & Ecosystem Services: Bloom or Bust?* The report seeks to set out the business case for biodiversity and outline the associated risks and opportunities for the finance sector.

Such initiatives indicate that an increasing amount of regulation, including financial reporting requirements, will be needed as public concern about biodiversity and ecosystem services grows and the external associated costs of impact on them are internalised.

Companies that currently adopt ISO 14000 or are working towards it in the future, should be aware that consideration is being given to including material flow cost accounting (MFCA) within the ISO 14000 family. This would mean that organisations seeking certification under ISO 14001 would need to demonstrate that they are using this instrument within their environmental management systems.

MFCA is a tool for using cost data in relation to the environment. It is oriented more towards internal use than external disclosure, with its focus on physical units, although it does have some overlap with environmental management accounting and these implications should be considered. Although the currently proposed standard is there only as guidance, the intention is to harmonise this with the International Federation of Accountants (IFAC) EMA guidance. It is therefore important that organisations understand the potential implications in terms of reporting their environmental data. MFCA is designed to compliment existing standards within the ISO 14000 family, including life-cycle assessment and environmental performance evaluation.

### 3.5 Are there benefits in integrating environmental issues with risk management?

For a business, the balance between risk and reward is an intrinsic element in creating shareholder value and contributing to economic growth, although the risk of long-term damage to business reputation can be particularly severe in the case of environmental risks. The costs of managing environmental risks must be viewed against the benefits of reducing risk. Efficient risk reduction therefore requires a compromise whereby the risk is reduced to a point that is as low as reasonably practicable or achievable. Trade-offs may exist in that, for example, reducing pollutants to a lower level could result in increased energy usage and contribution to global warming.

Most environmental risks are associated with hazards in areas such as:

- Flood, fire and storm.
- Resource use and abstraction.
- Emissions to air, groundwater and soil.
- Land pollution.
- Waste and hazardous waste disposal.

Some of these result from the failure of engineered systems. Hazards such as flood, storm and water stress are generally associated with the impact of climate change. Such risks might be beyond the scope of management techniques. There are also financial risks associated with the use of tradable permits such as emission allowances, waste disposal allowances and renewable obligation certificates.

Environmental risks are one subset of the portfolio of risks facing most organisations and the issues involved should therefore be included with other uncertainties in identifying, measuring and managing risk. Environmental issues therefore need to be integrated with other issues in the risk management and reporting structure. A process of stakeholder engagement helps with the identification and prioritisation of environmental risks.

The management of environmental risk has to take account of factors such as trust, confidence and reputation as well as the technical assessment of a particular risk. External communication is critical in securing credibility, given the possibility of external publicity or representation in the press.

### 3.6 What risk assessment techniques are available?

Environmental risk assessment may be particularly difficult due to the absence of a system to capture relevant information. An EMS can be used as a business tool to assist an organisation in managing risk, particularly as regards:

- comparing and prioritising risks of widely varying characteristics;
- managing risk reduction without compromising competitiveness; and
- installing mechanisms for risk identification and management, such as management of water treatment processes or the isolation of receptors by measuring efficiency of gas scrubbers for control of emissions.

It is important to distinguish between the process of obtaining regulatory authorisation and environmental risk management. In the case of businesses that are regulated, risk assessments take place within a regulatory framework such as the IPPC regime, the Environmental Protection Act, or the regulations governing groundwater and waste management.

Environmental risk assessment involves a tiered approach:

- risk screening, in which the hazards are identified and exposure assessed in order to determine the key risks;
- prioritisation – based on a combination of probability and magnitude of consequences; and
- qualitative and quantitative techniques – involving the assessment of source and receptor.

The analysis of risk is not an end in itself but an aid to decision making.

The reporting boundaries for financial information are unlikely to include information about environmental impacts in the supply chain, which can have a significant impact on an entity's reputation. The damage to brand value could therefore pass unnoticed until the detrimental practice or event is made public in an external report or press comment. To minimise the financial impact of this type of risk, as a matter of good practice some organisations operate procedures to manage environmental risks in their supply chains. Downstream impacts are also managed through stewardship initiatives, including the improvement of product design to minimise negative environmental effects.

Under the EU Emissions Trading Scheme, emission rights are governed by EU allowances (EUA). Since April 2006, the market price of an EUA has fallen significantly but is expected to recover as a result of more stringent allocation of allowances in Phase II of the scheme. For companies participating in an emissions trading scheme, carbon risk management is an important factor in decision making, the most important categories of risk being:

- cash flow risk, such as increased expenditure on measures to reduce emissions or the purchase of allowances;
- pricing risk, due to market price volatility, particularly around reporting or trading period ends;
- reputation risk, which can influence financial ratings and market capitalisation; and
- capital cost risks, such as more stringent credit conditions as a result of increased credit risk.

To identify, measure and control potential risks, companies need a robust greenhouse gas (GHG) inventory of past, current and projected future emissions.

### **3.7 Does the annual report provide enough information to enable a user to assess the financial impact of environmental risks and related opportunities?**

The broadest definition of risk includes the potential for gain as well as exposure to loss. Environmental impacts produce risks and costs but also offer great commercial opportunities. Thus, for example, while climate change poses significant risks and associated costs, it also offers great opportunities. The Stern Review estimates that:

'Markets for low-carbon energy products are likely to be worth at least \$500bn a year by 2050, and perhaps much more. Individual companies and countries should position themselves to take advantage of these opportunities.'

It is important that a balanced approach is adopted, so that downside risks are seen in the context of opportunities and potential benefits. In the ICAEW publication *No surprises – the case for better risk reporting* (July 1999), which addressed the measurement, management and reporting of risk, it was recommended that listed companies should include, in their annual reports, information about risks, actions to manage them and relevant measures.

The Environment Agency's 2007 *Review of Environmental Disclosures* found that an increasing number of companies (35%) provide their environmental disclosure in the audited sections of the annual report but that the levels of quantitative disclosures on environmental risks or opportunities that are financially material to shareholders and potential investors are relatively low. There was a view that little reporting could be described as comprehensive or even adequate for shareholders to assess the environmental risks or opportunities facing a company.

The main concerns of users regarding environmental information currently provided in annual reports are in the areas of:

- Consistency and comparability – in the absence of well-defined disclosure requirements, there is a lack of consistency and comparability.
- Relevance and usefulness – the lack of focus on environmental issues that are of critical importance to specific industry sectors. Disclosure of data does not necessarily reveal the effectiveness of a policy.
- Reliability and assurance – this is regarded as of secondary importance to the above qualities. There are also concerns as to the skills and experience required by assurance providers.

- **Materiality** – the business review requirement for disclosure of any **material** environmental issues is unsatisfactory without further guidance. While the AMD stresses the need for quantitative information, a qualitative approach, based on stakeholder needs and taking account of strategic, long-term impacts as well as operational factors such as system failure, is also considered important.
- **Presentation** – integration of material financial and non-financial information within annual reports is generally preferred. It will also assist international comparability.

In January 2007, the ABI issued its updated guidelines on responsible investment disclosure. Institutional investors support the revised guidelines, which encourage listed companies to include narrative discussion of the environmental, social and governance (ESG) risks they face. The guidelines also encourage companies to explain what steps they are taking to mitigate and address those risks.

### **3.8 Is any of the guidance described in this report relevant to SMEs?**

The disclosure requirements discussed in the first section of this report are mainly applicable to publicly listed companies and therefore exclude most SMEs. However, the size of an entity has no direct bearing on whether environmental regulations are likely to be significant to its operations in that small businesses are, in principle, as likely to cause environmental damage as large businesses. Similar standards of environmental performance are therefore expected and, while mandatory reporting does not apply, SMEs need to focus on their operational practices.

### **3.9 Are there any other sources that are particularly suited to SMEs' circumstances?**

By comparison with large companies, SMEs and their advisers are often ill-equipped to obtain practical knowledge of the implications of applicable environmental regulations. The introduction of new requirements and prohibitions often raises difficulties for smaller businesses. Indeed, research has shown that only a small percentage of SMEs can name an environmental regulation that applies to them. To address this problem, awareness of environmental regulations and access to the relevant legislation is facilitated through NetRegs, an on-line service provided by the Environment Agency to help smaller businesses in 150 industry sectors navigate some of the laws affecting their particular activities. It should be borne in mind that the examples provided do not necessarily reflect current legislation and professional advice should be sought on issues that appear to be relevant.

SMEs are affected by the purchasing policies of downstream businesses in the supply chain (ie, their large company customers). Pressures from the purchasing departments of downstream businesses often provide a commercial incentive for SMEs improve their environmental management. The environmental performance of SME business partners is consequently under scrutiny as companies downstream acknowledge accountabilities beyond their traditional (financial) boundaries. In some cases, concern about the environmental impacts of SMEs and the advent of regulation has led to larger companies acting as mentors to enable companies in the supply chain to improve their performance.

In the case of SMEs, controls over environmental issues are likely to be less formalised than in larger entities. Directors will nevertheless wish to ensure that any material impacts arising from environmental issues are identified and managed. There are several ways in which assistance is available to achieve this, such as the Acorn scheme. Under Project Acorn, a new British standard (BS 8555) has been launched which aims to promote best environmental practice for SMEs and to respond to the fact that larger organisations may wish to monitor the environmental performance of their suppliers. Project Acorn provides a framework that allows suppliers, particularly SMEs, to choose an appropriate level of environmental management through which to measure and demonstrate their performance.

### **3.10 What might you expect to see in a company's annual report to indicate that environmental concerns are receiving adequate attention?**

An increasing number of users have an interest in environmental matters, either as socially responsible investment (SRI) analysts, private investors, banks, employees or customers. In cases where there are material environmental impacts, they will normally expect to see a statement of corporate commitment, policies and strategy, showing the importance attached

to such issues. There could well be a competitive advantage to be gained from being seen as a leader in responsible environmental practices. The statement would usually deal with the overall control over such issues, whether through a committee of the board or a senior manager with practical experience of environmental issues in a corporate context.

Most users, particularly investors and lenders, will also be concerned to know whether there are any material financial impacts, actual or potential, arising from environmental issues. Where this is the case, discussion of environmental risks and uncertainties in the annual report, together with the related action taken, may therefore be appropriate as well as information about environmental performance. Depending on the nature of the entity, there could be a call for information about matters such as site remediation, disposal of waste, resource recycling or supply chain performance. In identifying the environmental matters likely to be of particular concern to report users, some form of stakeholder engagement is beneficial.

Many fund managers have a department dealing with SRI. In reviewing a company's annual report, the environmental matters attracting attention will tend to vary according to its nature, size and geographical location but, where environmental matters are significant, will generally fall within the following main areas:

- Commitments, policies and strategies.
- Environmental management/EMS and ISO 14001 certification.
- Principal environmental impacts.
- Environmental performance – absolute and relative.
- Fines, penalties or awards.

In appropriate cases, it is often helpful to users if reference is made to compliance with voluntary codes, such as EMAS or The Natural Step, or certification of the EMS to a particular standard, such as ISO 14001 or Project Acorn. This would normally help to demonstrate the adoption of desirable environmental policies.

### Example 3.5: Rio Tinto, Annual report and accounts 2007

Alcan	Results	2007 performance comment	Trend			
<b>Environment targets</b>						
All new sites (acquired or commissioned) required to be ISO 14001 certified within two years	⊕	All sites acquired prior to 2005 are ISO 14001 certified	^			
A 10% reduction in on-site greenhouse gas emissions, per tonne of product, between 2005 and 2010	⊕	4% reduction in on-site greenhouse gas emission per tonne of product compared to 2005	^			
<b>Safety targets</b>						
All new sites (acquired or commissioned) required to be OHSAS 18001 certified within two years	⊕	All sites acquired prior to 2005 are OHSAS 18001 certified	^			
Recordable case rate of 1.06 per 200,000 hours worked	⊕	0.82 recordable case rate, a 29 per cent improvement from 2006	^			
Lost time injury/illness case rate of 0.26 per 200,000 hours worked	⊕	0.28 lost time injury/illness rate, a 28 per cent improvement from 2006	^			
Serious injury case rate of 0.21 per 1,000,000 hours worked	⊕	0.23 serious injury case rate, no change from 2006	>			
<b>Performance data</b>						
	2005		2006		2007	
	Rio Tinto	Alcan Inc.	Rio Tinto	Alcan Inc.	Rio Tinto	Alcan Inc.
<b>Environment</b>						
Environmental Management System (EMS) certification (% operations)	90%	100%	95%	100%	100%	100%
Significant environmental incidents	8	0	8	15	9	9
Significant spills <sup>1</sup>	2	–	2*	–	2	–
Fines and prosecutions – Environment (US\$ '000)	67.9	–	56.8	–	9.6	–
Energy use (Petajoules) <sup>2</sup>	246*	281	257*	277	266	270
Greenhouse gas emissions – on-site (million tonnes CO <sub>2</sub> equivalent) <sup>3</sup>	14.1	20.6	15.2*	19.8	15.6	19.1
Greenhouse gas emissions – total (million tonnes CO <sub>2</sub> equivalent) <sup>3</sup>	26.7*	30.6	28.3	29.5	28.3	27.8
Freshwater input (billion litres)	–	210	–	200	–	190
Freshwater withdrawal (billion litres)	370	–	392*	–	411	–
Land disturbed (hectares)	1,083	136	1,112	167	1,154	104
Land rehabilitated (hectares)	376	42	401	182	418	58
Waste generation – mineral (million tonnes)	1,752	3.3	1,871	3.1	1,904	3.2
Waste generation – non mineral (million tonnes)	0.31	1.04	0.33	1.05	0.29	1.09

(Source: Rio Tinto, Sustainability development review 2007, pp85 and 86.)

In this, Rio Tinto has provided details of its progress – and that of a major subsidiary – towards EMS certification. It has also included information on ISO 14001 targets and performance at Alcan.

With the increasing importance of climate change, users expect annual reports to include reference to the issue. Some organisations may need to disclose the impacts of their participation in an emissions trading scheme, the treatment of carbon allowances and net liability for emissions. Other disclosures that might be expected by users include:

- assets or liabilities arising under the Renewable Obligation Certificates (ROCs) scheme for electricity generation;
- impact of the climate change levy and climate change agreements; and
- the impact of regulations regarding the end-of-life disposal of vehicles or electrical and electronic equipment, or those that will affect the chemicals industry under REACH.

As evidence that new environmental legislation is receiving adequate attention, a user might also expect to be alerted to any significant problems in achieving compliance.

### **3.11 How is a company's treatment of environmental issues communicated to the market and reflected in the share price?**

A number of rating and benchmarking systems are used on behalf of investors and others to grade organisations through the use of ratings and benchmarks based on environmental and other sustainability criteria. These systems provide a channel through which corporate environmental performance is communicated to the market and reflected in share prices. The measures usually include social impacts and ethical considerations as well as environmental performance. The main impetus for rating and benchmarking systems come from the growth of interest in SRI. The process often includes negative or positive screening, enabling the external impacts of an enterprise to be included in assessments of its performance.

Among a wide range of investment rating systems, the best known by UK investors are the Dow Jones Sustainability Group Index and the FTSE4Good Index Series. In the case of the FTSE4Good indices, companies are rated according to their environmental performance, as having a high, medium or low environmental impact within their specific sector. Criteria are based on meeting a number of core and desirable indicators in three areas: environmental policy, management system and reporting requirements. The FTSE has played a role in making information more relevant to users by continually raising the criteria and engaging directly with companies.

Investor awareness of climate change is increasing. In an initiative known as the Carbon Disclosure Project, established by a group of major institutional investors, the world's largest quoted companies are asked for information about their greenhouse gas emissions and those from their supply chain, products and services – and how they manage climate change issues. The results are scrutinised by the investment community, enabling investors to reallocate assets so as to reduce climate change risk and invest in companies offering solutions.

While rating systems can offer investors a benchmark in identifying companies that adopt best practice in their treatment of environmental issues, they are clearly less than perfect in ensuring that environmental performance is fairly reflected in share prices, as the market reacts to many other factors. To operate effectively, rating and benchmarking requires the timely publication of information that is relevant, complete, comparable and reliable.

In the case of companies with significant environmental impacts, the market will be best served if disclosure includes forward-looking information, enabling the investor to understand the risks and uncertainties involved and to gain some measure of the probable financial impacts. A clear statement of environmental policies, strategies, responsibilities and initiatives, supported by relevant quantitative information such as KPIs, is likely to enhance confidence and assist in attracting long-term capital. The business review should preferably include evidence of the effectiveness of those policies and, where appropriate, their linkage with financial performance.

### **3.12 How can a company have confidence regarding the credibility of its reported environmental information?**

The importance and sensitivity of different environmental issues and their reliability will vary according to the nature of the business. In some cases, the information reported is qualitative rather than quantitative. The issues most commonly reported are likely to be those concerned with waste management, pollution, energy, climate change and sustainability/corporate social responsibility. The calculation of liabilities for decommissioning or remediation of pollution and assessment of emissions are likely to be subject to the closest scrutiny as they are required to be included in figures reported in the financial statements and therefore subject to audit.

Credibility may be enhanced by an effective system of internal controls. If reported information relating to environmental issues is derived from an environmental management system that is integrated with the entity's management information system, the company is more likely to have confidence regarding the reliability of the information than if environmental information is assembled on an ad hoc basis. Furthermore, if the environment management system has been certified to ISO 14001, the process of certification can provide some additional support for the credibility of information reported.

Companies may wish to engage persons with appropriate experience to carry out sufficient work to provide confidence in the reliability of the information. This is particularly appropriate, for instance, in the initial years of operating an emissions trading scheme. Instead of engaging another adviser, such as a qualified environmental auditor, an organisation may prefer to rely on the firm responsible for its financial audit which, in many cases, will have staff with the relevant training and experience.

Some organisations will use an assurance process to cover disclosures in the annual report that are not subject to audit, including environmental matters. The process of assurance involves 'the expression of a conclusion regarding the degree of confidence that intended users can have about the evaluation or measurement of certain subject matter. It can apply to specified items of subject matter or to a range of items, such as those included in a stand-alone environmental or sustainability report.'

A variety of assurance approaches has been developed to satisfy the needs of internal and external users of information. For example, the accountancy profession has issued an international standard, ISAE 3000 *Assurance engagements other than audits or reviews of historical financial information*. As implied by the title, this standard is written in general terms. Development of more specific guidance is currently being considered by IFAC. A standard relating to sustainability reporting, the AA 1000 Assurance standard, has been issued by the Institute of Social and Ethical Accountability (AccountAbility).

However, it should be noted that these standards are primarily directed towards enhancing the credibility of information that is not part of the annual financial statements.

### **3.13 What are the (current) regulations regarding the need for an audit or assurance process?**

There is no statutory requirement for an environmental audit; however, any environmental information disclosed in the annual financial statements can be included within the scope of the financial audit where it is material.

As explained in Section 4 'Guidance for auditors', the auditor's responsibility with regard to the business review is limited to:

- assessing whether the information in the business review is consistent with the financial statements; and
- informing the directors if the auditor becomes aware that information that is required by law or regulations to be in the annual report has been omitted.

An auditor is not required to read information released separately from a document containing financial statements without the auditor's knowledge.

## 4. GUIDANCE FOR AUDITORS

'The environment is one of a range of important business-related issues that the auditor must consider when assessing the risk of financial misstatement.'



The significance of environmental matters to the financial statements and hence the related risks normally depends on the nature of an entity's business. Certain industries, by their nature, tend to be more exposed to significant environmental risk. It is less likely to be dependent on the size of an entity; small businesses are, in principle, as likely to cause environmental damage (or to benefit from related opportunities) as large businesses.

#### **4.1 How does an auditor decide whether environmental issues are significant to the financial statements?**

The auditor's procedures typically include obtaining an understanding of the entity by applying analytical procedures in assessing risk (ISA 315),<sup>1</sup> obtaining a general understanding of the legal and regulatory framework applicable to the entity and how the entity is complying with that framework (ISA 250) and performing other risk assessment procedures. Analytical procedures can assist in assessing the risk of material misstatement and use both financial and non-financial information. When considering the relationships between financial and non-financial data, this could include environmental issues. For example, examining the relationships between energy costs and production levels or between disposal costs and material usage may constitute a useful risk assessment procedure in obtaining an understanding of the entity and in the overall review at the end of the audit (ISA 520, paragraphs 2 and 3).

In planning the audit, the auditor should obtain sufficient knowledge of the business to understand the events, transactions and practices that could have a significant effect on the financial statements, including those arising from environmental issues. While obtaining an understanding of the entity is an essential part of performing an audit, the auditor uses professional judgement to determine the extent of understanding required to assess the risk of material misstatement. The depth of understanding required by the auditor is generally less than that of management and, almost certainly, less than that possessed by those responsible for environmental issues.

The auditor's knowledge of the business and industry, supported by discussion with management, will usually enable the auditor to identify significant environmental issues. Depending on the nature of the business, potential impacts on the financial statements may arise from:

- the application of laws and regulations, including proposed regulations (4.4 below);
- participation in a carbon trading scheme;
- activities and processes of the entity, including proposed changes, particularly processes involving pollution of soil, groundwater or air, the use of hazardous substances or disposal of hazardous waste;
- holding an interest in land and buildings that could have been contaminated by a previous user;
- climate change and potential flood risks;
- fines or penalties incurred; or
- dependence on a major customer or segment whose business is threatened by environmental pressures.

The auditor's enquiries could include discussions with general management, those responsible for environmental issues and, where one exists, members of the audit committee. In some circumstances, enquiries of in-house legal personnel might also be appropriate.

In obtaining an understanding of the business, the auditor considers the overall controls and how the client's information system captures events and conditions that are significant to the financial statements (ISA 315, paragraph 81). The auditor may need to consider whether management has the competence to deal with environmental issues and has implemented a process to identify and monitor environmental risks. If an environmental management system is in operation, the auditor may review the way in which it is linked to the management information system (see 4.3 below).

Other factors that the auditor could consider include:

- the extent to which the business is based on the use of environmentally sensitive materials, such as water, energy and steel, or on waste disposal/recycling;

<sup>1</sup> All ISA references refer to the International Standards on Auditing (UK and Ireland).

- for entities in the extractive industries, chemical manufacturers or waste management companies, environmental obligations that result from the impact of laws and regulations on their core businesses;
- the construction of buildings or linked businesses in flood plains with the associated risks;
- the effect of market issues, such as a product's compliance with environmental legislation, customer perceptions of a product's environmental performance or the impact of environmental pressures on suppliers;
- if the entity produces an environmental report (or a report on sustainability or corporate responsibility incorporating environmental issues), reading the report is likely to assist the auditor in obtaining a knowledge of the business;
- if the entity has received a report by an environmental adviser, or a management review of its environmental management system, this could be helpful in expanding the auditor's knowledge of the business; and
- where the entity has acquired ISO 14001 certification or EMAS verification, environmental risks should have been recorded in an environmental aspects register.

Examples of illustrative questions and procedures relevant for obtaining an understanding of the business are set out in Appendix 3: 'Audit process – examples and procedures'. The discussion of such issues can also be of benefit to management, for example the auditor might have previous knowledge or experience of environmental matters and their financial significance that would be relevant to the business, although this is not part of the audit.

#### **4.2 Where an environmental issue is potentially significant, how should the auditor assess the risk of a consequent material omission or misstatement in the financial statements?**

Some environmental issues have definite outcomes, for example a known charge for recycling of waste generated during the year. However, some other environmental issues involve the exercise of judgement by the directors about the financial outcome which depends in turn on a judgement as to the most likely environmental response, its timing and financial impact.

The audit approach with regard to environmental issues is determined by the strength of the entity's controls around those issues, their significance and the auditor's assessment of the risk of material misstatement. ISA 315, Appendix 3 sets out examples of situations where conditions or events may indicate the existence of such: eg, pending litigation and contingent liabilities related to an expected obligation for environmental remediation.

Based on the auditor's understanding of the entity's objectives and strategies, the auditor makes an assessment of the related business risks that may result in material misstatement of the financial statements. Business risk is broader than the risk of material misstatement but the auditor does not have a responsibility to identify or assess all business risks (ISA 315, paragraph 31).

#### **4.3 What additional steps are needed to respond to such a risk?**

The additional steps that are necessary where environmental matters are potentially significant will depend on the auditor's assessment of the resulting risk to the reliability of the financial statements, based on professional judgement. For example, when considering estimates relating to the environment, the auditor reviews the process used by the entity to develop estimates, taking account of the completeness of available information, the use of competent advice, the degree of prudence exercised and the approach adopted for dealing with inherent uncertainty (ISA 540). The auditor's review can also include a comparison of past estimates with subsequent events (ISA 560). The auditor reviews the basis of provisions for liabilities in the light of costs of decommissioning or remediation costs arising previously in similar circumstances and the requirements of IAS 37/FRS 12 *Provisions, contingent liabilities and contingent assets*. Examples 2A, 28 and 6 in the appendix to FRS 12 relate to environmental matters.

The auditor's consideration of materiality and its relationship with audit risk determines the nature, timing and extent of audit procedures and the evaluation of the effect of misstatements (ISA 320). The auditor identifies and assesses the risks of material misstatement at the financial statement level and at the assertion level for classes of transactions, account balances and disclosures (ISA 315, paragraph 100). Identified risks are therefore related to what can go wrong at the assertion level (eg, completeness) and the magnitude and

likelihood of misstatement are considered. Where the assessed risks include environmental issues that are potentially material to the financial statements, the auditor considers the adoption of procedures to address the risks, such as those set out in ISA 330. Further guidance on possible tests of control and substantive procedures relating to environmental issues is set out in Appendix 2: 'Accounting and auditing standards relevant to environmental issues'.

The auditor may need to seek technical advice from specialists, such as environmental advisers, engineers or lawyers. This can be derived from work carried out by a specialist engaged by management or by the auditor. The Environment Agency could be an additional source of specialist advice. The use of environmental advisers is discussed under 4.15 below.

#### **4.4 What controls over environmental risks would an auditor expect to see?**

Internal control is one of the principal elements in the management of risk and a sound system of internal control depends on a thorough and regular evaluation of the nature and extent of the risks to which an entity is exposed. Environmental matters may be a significant source of risk. Where this is the case, an internal control system would not be effective unless it covered items giving rise to environmental risk. Under the Combined Code issued by the Financial Reporting Council,<sup>2</sup> management is responsible for reviewing all internal controls. By contrast, the scope of the auditor's review is narrower and would normally be interpreted as focusing primarily on internal controls relating to financial information.

The existence of an environmental information system or an EMS does not necessarily ensure that there is no risk of material misstatement in the financial statements and such systems are not designed to reveal financial misstatements. However, they can assist auditors in understanding the controls a company has in place. Auditors will also find it useful to refer to 'International Guidelines on Environmental Management Accounting' issued by IFAC in 2005.

As with other sources of risk, effective internal controls would be expected to include the following components:

- the control environment;
- the entity's risk assessment process;
- the information system, including the related business processes relevant to financial reporting, and communication;
- control activities; and
- monitoring of controls.

It is management's responsibility to design and operate internal controls to assist in achieving, as far as practicable, orderly and efficient conduct of the business, including any environmental aspects. In practice, the way in which management achieves control over environmental matters varies:

- entities with low exposure to environmental risk and smaller entities could be monitoring and controlling environmental matters as part of their usual accounting and internal control system;
- entities that operate in industries with a high exposure to environmental risk are more likely than others to design and operate a specific internal control system, such as an EMS; and
- other entities may design and operate all their controls within an integrated control system, encompassing policies and procedures related to accounting, environmental and other matters (eg, quality, health and safety).

Although environmental risks can be equally important in small businesses, many of the internal controls operated by large entities are not practicable. Recording and accounting procedures can be performed by those who have both operating and custodial duties; for example, recording of waste products and effluents could be the responsibility of the manager in charge of production. Consequently, the auditor may not be able to rely on the segregation of duties to provide the necessary control. The auditor may also need to consider the risk of fraud – for example, where the person charged with monitoring pollution is also incentivised for reducing it.

<sup>2</sup> *Internal Control: Revised Guidance for Directors on the Combined Code* issued by the Financial Reporting Council, October 2005.

In relation to the management of risks specifically related to the environmental matters, tools that are employed by the management could be useful to auditors. For instance, EMA, on which guidance has been developed by the United Nations, is primarily intended for management to calculate the environmental costs and saving and make effective decisions. The data produced for EMA may provide some information for auditors considering the company's environmental management systems.

Furthermore, where companies have obtained an EMAS verification or EMS certification to ISO 14001, this may provide useful evidence on their internal controls over environmental risks. EMAS is a voluntary initiative designed to improve companies' environmental performance and has been established by Council Regulation 761/01. It aims to 'recognise and reward those organisations that go beyond minimum legal compliance and continuously improve their environmental performance'. It requires that participating organisations regularly produce a public environmental statement that reports on their environmental performance. Although voluntary, the publication of environmental information with independent verification by an external party could give those organisations enhanced credibility and recognition. ISO 14001 is an EMS specification standard and contains the required elements that must be satisfied by an organisation seeking certification to the standard.<sup>3</sup>

#### **4.5 Should the auditor evaluate such controls?**

Where environmental issues are a significant risk to the reliability of the financial statements, it is possible that the auditor will decide to evaluate the design and implementation of environmental controls. If the auditor intends to rely on the controls based on the evaluation of them, the auditor obtains evidence of the design and operating effectiveness of related controls.

#### **4.6 Do auditors check whether an entity is complying with relevant environmental laws and regulations?**

Recent years have witnessed the proliferation of new environmental laws, regulations and directives, both at the UK and European level. In understanding the external factors affecting an entity, the auditor should consider regulations applicable to the industry (ISA 315, Appendix 1). To assist auditors, Section 2 of this report, 'Reporting requirements', discusses some of the principal directives, legislation and accounting standards relevant to environmental issues.

Among other procedures, audit planning may involve obtaining a general understanding of the legal and regulatory framework applicable to the entity and how the entity is complying with that framework (ISA 250, Section A, paragraph 15 and ISA 300, paragraph 5). Management is responsible for ensuring that the entity's operations are conducted in accordance with laws and regulations. Where management has failed to comply with environmental laws and regulations, this can result in fines or penalties and, in extreme situations, may result in withdrawal of any licence or permit necessary to operate, raising doubt over the entity's ability to continue as a going concern. Furthermore, where a severe violation is identified, the Environment Agency has the authority to prosecute directors for a criminal offence which may result in a jail sentence.

After obtaining a general understanding of the framework, the auditor performs further audit procedures to help identify possible or actual instances of non-compliance with those laws and regulations within which the entity conducts its business and which are central to the entity's operations and hence to its financial statements (ISA 250, Section A, paragraph 18-1).

The auditor's understanding of any environmental compliance issues will be enhanced by discussion with management, including environmental managers. The extent and focus of such procedures would be dependent on the auditor's risk assessment:

- For some businesses, non-compliance with environmental laws or regulations would be central to the core operation and therefore to the financial statements. As well as possible fines, this would include the rare circumstances where irregularities could result in closure of the business, either because of withdrawal of an operating licence or because a fine is so substantial as to be 'life threatening'.

<sup>3</sup> Three other standards (14010, 14011 and 14012) from the International Organization for Standardization (ISO) are also relevant to the EMS verification. See [www.iso-14001.org.uk](http://www.iso-14001.org.uk) for further information.

- For other businesses, non-compliance with environmental laws or regulations would not necessarily fall into this category despite the potential or actual financial consequences such as fines or penalties.

Litigation and claims for environmental damage or pollution could possibly have a material effect on the financial statements. The auditor therefore carries out procedures in order to become aware of any litigation and claims involving the entity that may result in a material misstatement of the financial statements. When the auditor assesses a risk of material misstatement regarding litigation or claims that have been identified, or when the auditor believes that they exist, the auditor may need to seek direct communication with the entity's legal counsel. For this purpose, a letter prepared by management is sent by the auditor, requesting the entity's legal counsel to communicate directly with the auditor. If management refuses to give the auditor permission to communicate with the entity's legal counsel, this would be a scope limitation that would ordinarily lead to a qualified opinion or a disclaimer of opinion (ISA 501, paragraphs 32-37).

#### **4.7 What action should be taken if the auditor becomes aware of non-compliance with environmental legislation?**

When the auditor becomes aware of information concerning a possible instance of non-compliance with environmental laws or regulations, the auditor should obtain an understanding of the nature of the act and the circumstances in which it has occurred, and sufficient other information to evaluate the possible effect on the financial statements (ISA 250, Section A, paragraph 26). Where appropriate, the auditor will also discuss potential or actual non-compliance with management and obtain written representations.

Where there is significant doubt about the entity's ability to continue as a going concern due to its non-compliance with environmental laws or regulations, the auditor reviews management's plans for future actions based on its going concern assessment, obtains sufficient appropriate audit evidence as to whether or not a material uncertainty exists and seeks written representations from management regarding its plans for future action (ISA 570, paragraphs 8 and 26).

The main environmental regulator in England and Wales is the Environment Agency, established by the Environment Act 1995. The equivalent body in Scotland is the Scottish Environment Protection Agency. The Environment Agency maintains a public compliance register and pollution inventory, in which cases of non-compliance are recorded.

#### **4.8 Are there any particular difficulties in recognising and measuring the financial effects of environmental matters?**

There are a number of difficulties in recognising and measuring the financial effects of environmental matters in financial statements, all of which have implications for the auditor. For example:

- There is often a considerable delay between the activity that causes an environmental issue such as the contamination of a site due to industrial activity and its identification by the entity or the regulators.
- Accounting estimates do not necessarily have an established historical pattern and can exhibit wide ranges of reasonableness because of the number and nature of assumptions underlying the determination of these estimates.
- Environmental laws and regulations are evolving and interpretation can be difficult or ambiguous. Consultation with an adviser may be necessary to assess their impact on the measurement of assets and liabilities.
- Liabilities can arise other than as a result of legal or contractual obligations, for example, a voluntary commitment.

#### **4.9 How should an auditor deal with such problems?**

In dealing with these difficulties, which often involve a subjective approach or the use of estimates, the audit evidence available can be persuasive rather than conclusive. Auditors therefore need to use professional judgement in determining whether the planned audit procedures, either individually or in combination, will provide sufficient appropriate audit

evidence. Furthermore, there are qualitative as well as quantitative aspects to materiality, and if certain environmental matters are considered particularly sensitive, they may therefore be considered material notwithstanding a quantitative threshold.

Auditors also need to be alert to situations where management has not considered the possibility that material environmental issues can have an impact on the financial statements and consequently the related recognition and measurement issues have not been addressed. For example, the auditor could become aware of significant pollution at an operating site or activities carried out by the entity in environmentally sensitive areas. Activities by a previous occupant that may have caused environmental pollution might also result in a liability.

The value of a property could also be affected by environmental contamination of a neighbouring site. In such cases the auditor brings the matter to the attention of the management and establishes how the management will estimate the potential liabilities.

In certain circumstances, voluntary activities could result in unavoidable expenditure, for example an entity might have identified contamination of land and, although under no legal obligation, decided (and announced its intention) to remedy the contamination, because of concern for its long-term reputation and its relationship with the community. The auditor needs to establish that the circumstances are such that the entity cannot reasonably avoid the future expenditure.

Where the auditor considers that there is a significant risk related to the measurement of fair value, the auditor should evaluate whether the management assumptions provide a reasonable basis for fair value measurements and disclosures in the entity's financial statements. For example, the measurement of fair value as a result of environmental impairment could be reliant on the availability of new technology being developed (ISA 545, paragraph 39).

#### **4.10 What are the issues affecting the auditor's review of the accounting treatment adopted for the impact of carbon emissions, the treatment of liabilities and taxes, the capitalisation of environmental costs and the recognition of environmental impairment?**

Environmental matters arising as a result of the auditor obtaining an understanding of the business or as part of the auditor's overall review may require a particular accounting treatment or disclosure.

##### **Carbon emissions**

Where an entity participates in an emissions trading scheme, the related transactions and their disclosure in the financial statements, if material, will need to be considered by the auditor, particularly in the early stages of adoption of the scheme. The auditor should seek to obtain sufficient appropriate evidence that:

- the entity complies with the requirements of the scheme;
- systems are operating to measure emissions and process data; and
- measurement and disclosures in the financial statements are in accordance with international financial reporting standards, particularly IFRIC 3 *Emission rights* (or an alternative generally accepted practice – see 2.5 'Reporting requirements').

Assessment of the fair value of emission allowances can be difficult due to the absence of a liquid market. Fair value should be determined by management both at the time of recognition of allowances granted and for measurement of the provisions necessary for emissions during the year. The auditor may need to establish the reliability of annual emission reports to the national competent authority made by the verifier. For further guidance, see the *FEE Alert: Emissions Trading* (January 2005).

##### **Liabilities and taxes**

In assessing provisions for liabilities, the auditor will need to confirm that there is a present obligation that results from a past event, expected to result in a probable outflow of resources, the amount of which can be estimated reliably. In the case of an obligation arising from an environmental event, the expected outflow of resources could be remote or, in rare cases, it may not be possible to estimate the amount involved reliably. In such circumstances, the

auditor will consider whether the obligation is disclosed as a contingent liability. The appendix to FRS 12/IAS 37 includes examples of its application to environmental issues.

In some cases, the auditor will also need to examine whether any material financial obligations arise under the EU Directives dealing with liabilities relating to the end-of-life disposal of vehicles and waste electrical and electronic equipment. Such obligations may be required to be dealt with in accordance with the interpretation IFRIC 6/UITF 45 *Liabilities arising from participating in a specific market – Waste electrical and electronic equipment*.

The auditor might find it necessary to consider the treatment of environmental taxes, fines and penalties. These would normally be regarded as an operating cost rather than being included with other taxes or income. Where such items are significant, separate disclosure would assist any assessment of environmental performance and might even be necessary for the financial statements to give a true and fair view.

### Capitalisation

Generally, expenditure incurred partly or mainly for environmental reasons can be capitalised if the expenditure is expected to result in future economic benefits to the enterprise. There is some uncertainty as to whether an **increase** in economic benefits, rather than **continued** economic benefits, is required to meet the criteria for capitalisation. Depending on the circumstances, expenditure to mitigate future environmental damage, or to avoid closure where new laws would require an enterprise to curtail its operations, could be regarded as giving rise to a form of future benefit. Subject to an impairment test, such expenditure may qualify for recognition as an asset. The auditor considers whether the accounting treatment is appropriate and checks that the resulting book value does not exceed the asset's recoverable amount.

### Impairment

Where assets are impaired due to environmental factors, difficulties often arise in determining the recoverable amount or in estimating the timing involved. General accounting guidance regarding the treatment of impairment is provided in IAS 36/FRS 11 *Impairment of assets* and regarding provisions in IAS 37/FRS 12 *Provisions, contingent liabilities and contingent assets*.

Measurement of an environmentally impaired asset can be affected by:

- delayed disposal of the asset, due to the need to deal with contamination, resulting in clean-up costs and increased interest charges;
- uncertainties due to the possibility of improvements in related technology or changes in legislation; and
- risks arising from the **stigma** effect, including the risk of migration to adjacent sites, deterring potential purchasers and resulting in a more restricted market.

Within these constraints, the auditor will wish to be satisfied that management has considered the issues and consider whether that any environmentally impaired asset is not stated at an amount that exceeds its recoverable amount.

## 4.11 Do environmental matters introduce any unusual problems when obtaining audit evidence and to what extent is the auditor able to rely on the entity's documentation as evidence?

Obtaining sufficient appropriate audit evidence relating to environmental issues can cause difficulty due to its specialised nature or limited availability. Audit evidence is more reliable when it is obtained from sources independent of the entity, when it exists in documentary form (preferably original documents rather than photocopies) and when it is obtained directly by the auditor. Internally generated audit evidence is more reliable if the related internal controls are effective (ISA 500, paragraph 9).

In the case of environmental matters, tests of control might provide evidence about the design and operation of internal control systems, including any environmental management systems that are in place. The auditor can also use substantive procedures to corroborate management assertions when considering, for example:

- the existence, completeness, valuation, presentation and disclosure of an environmental liability;

- the occurrence, measurement, allocation and presentation of environmental expenditure that is capitalised;
- the existence, completeness, valuation and disclosure of environmentally impaired assets; or
- the occurrence, completeness and presentation of environmental fines and penalties.

Where such items are not separately presented in the financial statements and there is no requirement to do so, the auditor considers whether the true and fair view is affected by non-disclosure.

Examples of substantive audit procedures to detect a material misstatement relating to environmental matters are set out in Appendix 3 on audit process.

Records or documents relating to environmental issues may not be subject to the same degree of control as those used for financial items. Additional site visits are sometimes necessary where environmental issues arise and are material to the financial statements. In the case of physical inventory, the auditor will consider the procedures used by the entity to identify inventory that is subject to environmental damage. For entities whose environmental impacts are regulated by specific operating conditions, such as holding a permit or licence, the auditor will need to consider whether there have been any events that would threaten an entity's licence to operate and whether these raise doubts about its ability to continue as a going concern.

Uncertainty regarding the incidence, measurement and timing of environmental matters can result in subjective management assertions, for example those relating to existence and completeness. The auditor is likely to encounter problems in obtaining evidence to corroborate such assertions, whether they result in an item being presented in the financial statements or in non-disclosure. In such circumstances, the auditor obtains written representations from management to confirm responses to oral enquiries. For example, on material matters when other sufficient appropriate audit evidence cannot reasonably be expected to exist or when the other audit evidence obtained is of a lower quality (ISA 500, paragraph 34).

The auditor undertakes additional procedures in circumstances where litigation and claims relating to environmental issues potentially have a material effect on the financial statements:

- when the auditor assesses a risk of possible misstatement, the auditor should seek direct communication with the entity's legal counsel;
- a letter prepared by management and sent by the auditor should request the entity's legal counsel to communicate directly with the auditor; and
- if management refuses to give the auditor permission to communicate with the entity's legal counsel, this would be a scope limitation and would ordinarily lead to a qualified opinion or a disclaimer of opinion (ISA 501).

Where environmental issues are material to the financial statements, the auditor obtains sufficient appropriate audit evidence that all environmental events and issues arising up to the date of the auditor's report that require adjustment of, or disclosure in, the financial statements have been considered. Furthermore, these issues could make up part of the auditor's consideration of events subsequent to the balance sheet date (ISA 560).

#### **4.12 Does the audit opinion cover any statement in the directors' report or the business review about environmental issues?**

The auditor is not required to verify, or report on, the completeness of the information in the directors' report. However, if the auditor becomes aware that information that is required by law or regulations to be in the directors' report has been omitted, the auditor informs those charged with governance. Following the Companies Act 2006, all companies that are not classified as medium or small companies, where appropriate, need to provide an analysis using KPIs, including information on environmental and employee matters. More extensive disclosures on environmental policies and their effectiveness are required for quoted companies.

In the case of information contained in the directors' report, including any environmental matters in a business review or operating and financial review published within, or cross-referenced to, the directors' report, the auditor needs to read it to identify material inconsistencies with the audited financial statements and if there are any apparent misstatements the auditor should seek to resolve them. The procedures carried out in relation to the directors' report include agreement to accounting records or working papers of any financial information not taken

directly from the financial statements. Examples include environmental ratios such as energy use per unit of value added.

#### **4.13 What action should be taken in the event of any inconsistencies with the financial statements?**

For all entities, the auditor reads 'other information in documents containing audited financial statements' (including any environmental information) for apparent misstatement or inconsistency with the financial statements. If the auditor becomes aware of any misstatements or inconsistencies, the auditor should seek to resolve them. If the auditor is unable to resolve the problem, this may necessitate a qualified opinion on the financial statements, and/or reference to an 'other matter' in the auditor's report, drawing attention to a potential misstatement or inconsistency in the other information.

#### **4.14 If the entity produces a separate environmental report, or a corporate responsibility report containing environmental information, is the auditor obliged to read it?**

It is important to distinguish between information included in documents contained within the annual accounts and other information released separately without the auditor's knowledge. If an entity produces an environmental report, or a corporate responsibility report containing environmental information, that does not form part of its annual report containing the audited financial statements, the auditor is not required to read it. However, if, prior to its release, the auditor becomes aware of the separate report, the auditor will often regard the information in the report as contributing to a knowledge of the business and may therefore read it in this context.

#### **4.15 When should an auditor consult with environmental advisers or obtain expert assistance and what should the auditor do if information provided by an adviser engaged by management appears to be unreliable?**

If the auditor intends to use the results of work carried out by an adviser, the auditor considers its adequacy for the purposes of the audit, as well as the adviser's competence and objectivity, assessing the adviser's professional qualifications, experience and resources. An adviser could be contracted or employed by the entity or by the auditor. The involvement of other advisers in some aspects of the audit ordinarily should be mentioned in the audit engagement letter (ISA 210, paragraph 8).

The work of an adviser is often available in the form of a report or provided directly to management. In principle, the work provided by an environmental adviser is comparable to evidence on other matters that is provided by other advisers, for example, valuers, actuaries and lawyers. Reports by advisers include those relating to independent checks required under environmental legislation, for example an environmental impact assessment.

If a specific report has been issued and the auditor intends to place reliance on it, the auditor may wish to communicate directly with the adviser to help understand the nature and scope of any limitations of the adviser's report.

When using the work performed by an adviser, the auditor obtains sufficient appropriate audit evidence that the scope of the adviser's work is adequate for the purposes of the audit. This would normally involve a review of the terms of engagement between the adviser and the entity. The auditor should evaluate the appropriateness of the adviser's work as audit evidence regarding the assertion being considered. For instance, the auditor will consider whether the substance of the adviser's findings is properly reflected in the financial statements.<sup>4</sup> The auditor may need to obtain an understanding of the assumptions and methods used by the adviser to consider whether they are appropriate and reasonable.

If the results of the adviser's work do not provide sufficient appropriate audit evidence, are not consistent with other evidence or appear to be unreliable, the auditor tries to resolve the matter through discussions with the entity and the adviser. Further steps might involve applying additional audit procedures, including possibly engaging another adviser to obtain a

<sup>4</sup> There are instances of annual reports containing material errors related to environmental disclosures as a result of adviser information uncritically used.

second opinion, or, if necessary, modifying the auditor's report. The auditor may wish to seek advice from an adviser employed by the Environment Agency. Where the auditor directly employs external consultants, the auditor considers their independence from the client, eg, their previous consultancy work for the company (APB Ethical Standard ES 2).

The auditor's report does not refer to the work of an adviser, in order to avoid the reference being mistaken for a qualification of audit opinion or a division of responsibility. If the auditor's report is to be modified as a result of the adviser's work, the auditor will need to explain the nature of the modification and the work performed by the adviser, as well as obtaining the permission of the adviser (ISA 620).

#### **4.16 Should the auditor obtain additional representations from management about the effect of environmental matters on the financial statements?**

Some of the evidence available to auditors regarding the impact of environmental matters on the financial statements may be persuasive in nature rather than conclusive. Where environmental matters could be significant to the financial statements, the auditor will probably need to seek specific representation from management on matters material to the financial statements where other sufficient appropriate audit evidence cannot reasonably be expected to exist (ISA 580). For example, that management:

- is not aware of any material liabilities or contingencies arising from environmental matters, including those resulting from illegal or possibly illegal acts;
- is not aware of any other environmental matters that may have a material impact on the financial statements; or
- if aware of such matters, has disclosed them properly in the financial statement.

Management representations are typically required where material environmental issues are discussed or observed but there is no or limited related documentation or evidence (ISA 500, paragraph 34). Management representations might also be needed as to:

- the completeness of disclosure of environmental liabilities, all known actual or possible non-compliance with environmental laws and regulations;
- any pending claims or legal action regarding environmental issues;
- the reasonableness of significant assumptions regarding environmental issues, including whether they appropriately reflect management's intent and ability to carry out specific courses of action on behalf of the entity; and
- the measurements and disclosures related to fair values of environmental issues. Such representations include the appropriateness of the measurement methods and assumptions, the basis used, the completeness and appropriateness of disclosures and whether subsequent events require adjustment to the fair value measurements and disclosures included in the financial statements. (ISA 545, paragraph 63).

#### **4.17 Do auditors require additional training and guidance to enable them to address the issues raised in this report effectively?**

While the general principles of auditing remain the same, consideration of the financial impacts of environmental matters can introduce issues that are new to the auditor. In particular, the auditor might be confronted with the existence of environmental laws and regulations, the possibility of impairment due to pollution and the operation of tradable permits such as greenhouse gas emission allowances, as well as a number of specialised terms with which the auditor may not be familiar.

There is likely to be an increasing need for an auditor's training and continuing professional development to include a basic understanding of some of the more common ways in which environmental issues can have an impact on the financial statements. The auditor has an ethical obligation not to act beyond his ability, knowledge and experience, nor can an auditor be expected to have the same degree of expertise as an environmental specialist. Where an auditor believes that environmental issues may be significant to the financial statements and an adviser is involved, the auditor needs to have a broad understanding of the adviser's role and the methods and assumptions used.

As regards specific areas, before undertaking particular engagements, members of the audit team should familiarise themselves with standards such as:

- IAS 37/FRS 12 *Provisions, contingent liabilities and contingent assets* – in relation to the identification and assessment of environmental risks;
- IAS 36/FRS 11 *Impairment of assets* – in relation to the identification and measurement of tangible and intangible assets that may be subject to environmental impairment;
- IFRIC 3 *Emission rights* (or any successor interpretation); and
- IFRIC 6 *Liabilities arising from participation in a specific market – Waste electrical and electronic equipment*.

#### **4.18 Would an assurance process offer an alternative to audit in ensuring credibility of environmental information in financial statements?**

Broad principles on assurance have been established by the IAASB *International Framework for Assurance Engagements* and a standard ISAE 3000 *Assurance engagements other than audits or reviews of historical financial information*. ISAE 3000 sets out the engagement process, stage by stage, such as planning and performing the engagement, using the work of an adviser, obtaining evidence and preparing the assurance report based on the concept of reasonable assurance. However, this report addresses environmental information within the scope of the annual report and the auditor's opinion should be based on auditing standards rather than the application of ISAE 3000.

In the context of carbon emissions, it is relevant to note that the IAASB is now undertaking a project entitled 'Assurance Engagements on Carbon Emissions Information', which is based on ISAE 3000. For some entities, such information can be material to the financial statements.

In carrying out their responsibilities, the credibility of environmental information in financial statements is supported by the fact that auditors act in the interests of primary stakeholders (for companies, the general body of shareholders) while having regard to the wider public interest as part of the understanding of the entity and its environment.

# APPENDICES



## Appendix 1: Environmental directives – financial accounting impacts

Environmental subjects	Summary	Key related legislation		Date effective from/major milestones
		EU	UK	
Air quality	<p>The Framework Directive's main objectives are to:</p> <ul style="list-style-type: none"> <li>define and establish objectives for ambient air pollution in the Community designed to avoid, prevent and reduce harmful effects on human health and the environment as a whole;</li> <li>assess ambient air quality in member states on the basis of common methods and criteria;</li> <li>obtain adequate information on ambient air quality and ensure that it is made available to the public inter alia by means of alert thresholds; and</li> <li>maintain ambient air quality where it is good and improve it in other cases.</li> </ul> <p>It enacts these principles through four Daughter Directives. These and the Framework Directive have been consolidated in a new Ambient Air Quality Directive that is expected to come into force in May 2008.</p> <p>The Large Combustion Plants Directive gives emissions limit values for sulphur dioxide, nitrogen oxides and dust for new plant, updating previous legislation in the light of new technology. All 'new' plants – post-1987 – must comply with the emission level values set out</p> <p>Existing plants – either meet the limits on plant-by-plant basis or have a national plan. The UK has chosen the National Plan approach that allows poor performing plant to be balanced against high performance plants.</p> <p>The Waste Incineration Directive is to minimise the impact of negative environmental effects on the environment and human health resulting from emissions to air, soil, surface and ground water from the incineration and co-incineration of waste. It covers virtually all waste incineration and co-incineration plants. It brings together the previous Municipal and Hazardous Waste Incineration Directives.</p> <p>The Solvents Emissions Directive deals with regulations for installations many of which were already covered under PPC and the Environmental Protection Act. The remainder have been transposed into UK law through directions requiring compliance through EPA authorisation or PPC permits.</p>	<ol style="list-style-type: none"> <li>1. Ambient Air Quality Directive 2008/50/EC (merging existing Directive 96/62/EC and Daughter Directives 1999/30/EC, 2000/69/EC, 2002/3/EC) and Daughter Directive 2004/107/EC.</li> <li>2. The Large Combustion Plants Directive 2001/80/EC.</li> <li>3. Waste Incineration Directive 2000/76/EC.</li> <li>5. Solvents Emissions Directive 1999/13/EC.</li> </ol>	<ol style="list-style-type: none"> <li>1. The Air Quality (England) (Amendment) Regulations 2002 (SI 2002/3043).</li> <li>2. The Air Quality (England) (Amendment) Regulations 2001 (SI 2001/2315).</li> <li>3. The Air Quality (England) Regulation 2000.</li> <li>4. The Air Quality Standards Regulations 2007 (SI 2007/64).</li> <li>5. Air Quality Strategy for England, Scotland, Wales and Northern Ireland, 17 July 2007 (Cmd paper No 7169).</li> <li>6. The Large Combustion Plants (England and Wales) Regulations 2002 (SI 2002/2688).</li> <li>7. The Waste Incineration (England and Wales) Regulations 2002 (SI 2002/2980).</li> <li>8. Solvent Emissions transposed through existing legislation PPC/EPA.</li> </ol>	<p>Framework Directive adopted in 1996, Daughter Directive 1999.</p> <p>Subsequent directives and transposed regulations have become effective during the period 2000–2007.</p> <p>In 2016 power stations will either have met the emission limit values set in the directive or will have closed having using up their operating hours allowed under their limited life derogation.</p> <p>WID applied immediately to new incinerators and from 28 December 2005 to existing ones.</p> <p>The Solvent Emissions Directive has elements that allow compliance as late as 31 October 2007.</p>
Biocides	<p>The Biocidal Product Directive aims to harmonise the European market for biocidal products and their active substances. At the same time it aims to provide a high level of protection for humans, animals and the environment.</p>	<ol style="list-style-type: none"> <li>1. The Biocidal Products Directive (98/8/EC).</li> <li>2. Limitations Directive (Directive 76/769/EEC) including restrictions on: <ul style="list-style-type: none"> <li>• Arsenic (Directive 2003/2/EC).</li> <li>• Creosote (Directive 2001/90/EC).</li> <li>• Organic Tin Compounds (Directive 2002/62/EC).</li> <li>• Mercury (Directive 89/677/EEC).</li> <li>• Pentachlorophenol (Directive 1999/51/EC).</li> </ul> </li> <li>3. REACH (EC 1907/2006).</li> <li>4. Plant Protection Products (91/414/EEC).</li> </ol>	<ol style="list-style-type: none"> <li>1. The Biocidal Products Regulations 2001.</li> <li>2. Biocidal Products (amendment) Regulations 2003.</li> <li>3. Biocidal Products (amendment) Regulations 2005.</li> </ol>	<ol style="list-style-type: none"> <li>1. Directive came into force 14 May 2000.</li> <li>2. EU Report on revision of Directive published in October 2008.</li> <li>3. Revision of specific annexes in the Directive were completed by June 2009.</li> <li>4. Staged introduction of products into UK with third review of products completing the process by March 2009.</li> </ol>

Total financial impact estimated (UK/EU) (where available)	Types of organisation affected	Financial impacts on organisations (description)	Financial management options
<p><b>Air Quality Framework Directive and similar Regulations</b></p> <p><b>Benefits</b></p> <p>Benefits of the directives are calculated in terms of improved human health and then monetised. These benefits take into account a range of different approaches especially transport strategies. The benefits of some methods have present value of between £100m and £200m.</p> <p><b>Costs</b></p> <p>Costs of the methods generally outweigh the monetised benefits at low risk estimates. However at higher risk estimates and assuming benefits start to be achieved early the NPV of methods can be substantial – over £1,000m.</p> <p><b>Large Combustion Plants Directive</b></p> <p><b>Benefits</b></p> <p>Estimated benefits to the European Community of reductions in new plants alone are based on reductions in material damage, morbidity and mortality and, monetised, amount to 38,444 million ECU between 2000 and 2010. The UK method of estimating benefit is more conservative but still considerable however the likely new plant over the period will be gas turbine, which is already covered under UK legislation. Benefits will be seen from other European countries whose emissions affect the UK however.</p> <p>Total UK benefits from new and existing plant have been estimated in the range £150m to £800m as a result of taking the ‘National Plan’.</p>	<p>Electricity supply industry, refineries and other large and medium-sized industries that use sulphur-containing fuel (oil or coal).</p> <p>Road traffic emissions require improved vehicle emission and fuel quality standards and local traffic management. This has implications for all businesses which rely on distribution and supply by road, as well as transport providers in the private and public sector.</p> <p>Industries, such as non-ferrous metal smelters, iron and steel production, and lead-acid battery manufacturing contribute to ambient lead levels in industrial areas.</p> <p>Solvent emissions affect a wide variety of industries including printing, laminating, surface cleaning, vehicle and other coating and finishing, vegetable and animal oil/fat refining and pharmaceuticals manufacturing.</p> <p><b>Large Combustion Plants Directive</b></p> <p>Large electricity generation, oil refining and other operators of large boilers such as chemical manufacturers, car manufacturers, sugar refiners, the primary and secondary iron and steel producers and paper manufacturers.</p>	<p><b>Large Combustion Plants Directive</b></p> <p>The costs arise as a result of industry needing to operate plants so that emissions are reduced, either by different operating practices or by additional emissions control equipment.</p> <p>The total cost has been estimated in the range £150-770m.</p>	<p><b>Large Combustion Plants Directive</b></p> <p><b>Balance sheet impact</b></p> <p>Existing plant will require new equipment which will be capitalised and appear on the balance sheet.</p> <p><b>Profit and loss impact</b></p> <p>Depreciation of new emissions control equipment will appear on the profit and loss statement. In addition operating regimes will necessarily change and day-to-day costs are likely to increase as a result.</p> <p>Additional costs will be passed through to the consumer.</p>
<p>1. The original impact assessment estimated total present value costs of the Biocidal Product regulations in England and Northern Ireland to be between £132m and £222m over 10 years. This included one off costs of setting up the systems of between £62m and £151m. benefits were not quantified although were expected to be significant in health, trade and environment as well as some real costs savings.</p> <p>2. The impact of of the 2003 amendment introducing a general industry charge was considered to be very low in comparison with the costs of data collection and set up of the original regulations amounting to a total of £167,000 present value over 10 years.</p> <p>3. Finally the 2005 amendment made some small corrections that saved the industry some £116,000 in present value. Additional costs to be born by the Health and Safety Executive amounted to £234,000.</p>	<p>Business sectors affected include producers of:</p> <ul style="list-style-type: none"> <li>• Disinfectants and general biocidal products.</li> <li>• Preservatives.</li> <li>• Pest control products.</li> <li>• Other specialised biocidal products.</li> </ul>	<p>Costs to firms are primarily those incurred in seeking authorisation or registration to bring new biocidal products to the UK market. In some cases manufacturers may decide these extra costs prevent a product from being commercially viable and do not proceed. In other cases a product may fail the risk assessment. In either case it would be illegal to market those products within the EU. There is also an administrative costs in reviewing certain products and providing additional data. In some cases these costs can be passed on to the consumer. However the harmonisation of EU member states also means increased competition which may result in reduced revenue. Regulatory costs are also charged by HSE to the biocides industry.</p>	<p><b>Profit and loss impact</b></p> <p>Costs are largely administrative and should be passed through the P&amp;L as expenditure.</p>

## Appendix 1: Principal directives and regulations (continued)

### Useful documents (continued)

Environmental subjects	Summary	Key related legislation		Date effective from/major milestones
		EU	UK	
Biodiversity	<ul style="list-style-type: none"> <li>• Framework for nature conservation.</li> <li>• Prohibits, capture, killing or disturbance of a member of an animal species listed ('a European protected species').</li> <li>• Prohibits picking, collecting, cutting, uprooting or destruction of a plant of certain listed species.</li> <li>• Provision is made for capture and rescue of species on development sites under licence (from Defra).</li> <li>• Licences may be granted following planning permission subject to licensing tests.</li> </ul>	1. Habitats Directive (92/43/EEC).	1. Part IIA, The Environmental Protection Act 1990. 2. Section 57, The Environment Act 1995. 3. The Town and Country planning Act 1990. 4. Part V, s101, Conservation Regulations Act 1994.	Ongoing implementation from 1994 onwards.
Contaminated land	<p>All organisations should operate in a way that prevents contamination of land and water.</p> <p>Where contamination is caused or found it should be investigated and dealt with at the earliest opportunity to limit any risks to health or environmental damage.</p> <p>Voluntary action to manage contamination or action during development is normally preferable to regulatory action (such as Part 2A).</p> <p>The Part 2A regime aims to provide an improved system for identification and remediation of contaminated land. Primary regulatory role with local authorities but the Environment Agency become the enforcing authority for 'special sites'. Local authorities are required to identify contaminated land sites in their districts. They (or the Environment Agency for special sites) then have to see that the site is remediated, preferably by those who are responsible for the pollution. In certain cases they can carry out remediation themselves and have the power to recover all or part of the costs of doing this.</p>	Range of directives including: <ol style="list-style-type: none"> <li>1. Directive 2000/60/EC – The Water Framework Directive.</li> <li>2. EU Council Directive 80/68/EEC on the protection of groundwater against pollution caused by certain dangerous substances (1979).</li> <li>3. Landfill Directive 1999/31/EC.</li> <li>4. Environmental Liability Directive 2004/35/EC.</li> <li>5. Proposed Soil Framework Directive.</li> <li>6. See IPPC subject area for other relevant legislation.</li> </ol>	1. Part 2A of The Environmental Protection Act 1990 (2000). 2. Water Resources Act 1991. 3. Pollution Prevention and Control Act 1999.	Part 2A came into force in April 2000. Environment Act 1995 inserted Part 2A into the Environmental Protection Act 1990. Regulations and Statutory Guidance issued in 2000 and replaced in 2006.
Emissions trading	<p>Establishes a scheme for greenhouse gas emission allowance trading within the EU in order to promote reductions of greenhouse gas emissions in a cost-effective and economically efficient manner.</p>	Directive 2003/87/EC Of The European Parliament And Of The Council establishing a scheme for greenhouse gas emission allowance trading within the Community and Amending Council Directive 96/61/EC.	The Greenhouse Gas Emissions Trading Scheme Regulations 2005 (SI 2005/925).	First phase: 1 January 2005–2007 Second phase: 1 January 2008–2012

Total financial impact estimated (UK/EU) (where available)	Types of organisation affected	Financial impacts on organisations (description)	Financial management options
<p>Costs to business should reduce, as the intent is to streamline processes without applying any additional legal tests.</p>	<p>Developers and associated construction companies. Increased work for ecological consultants advising companies.</p>	<ul style="list-style-type: none"> <li>The planning and consent process should be quicker and easier to understand.</li> <li>Licence applications will not increase in charge.</li> <li>Costs of mitigation work to protect European protected species are already borne by developers.</li> </ul>	<p>Organisations must budget both time and cost to ensure planning processes are complete in readiness for development timescales.</p> <p><b>Balance sheet impact</b> Construction is often capital investment and as under FRS 12 and FRS 15 the associated planning and consent work should also be capitalised and appear on the balance sheet as part of the cost of the final fixed asset.</p> <p><b>Profit and loss impact</b> Main impact will be in the writing off or depreciation of planning and consent work that has been capitalised.</p>
<p>Estimated UK expenditure on measures to address contamination is in the region of circa £1bn per year.</p> <p>The majority of costs are borne by the private rather than public sector.</p> <p>UK government funding made available in 1996 amounted to £50m over three years to help local authorities in inspection strategies, investigations and enhancement action and £45m in 'Contaminated Land Supplementary Credit Approval (SCA)' for capital costs incurred by LA's in inspecting and remediating land.</p> <p>Between 2000 and 2006 approximately £20m per year of capital support has been made available to regulators for Part 2A investigation and remediation work.</p>	<p>All organisations:</p> <ul style="list-style-type: none"> <li>with current land holdings that is or might be contaminated</li> <li>which have previously owned or occupied land that is or might be contaminated</li> <li>which carry out, or have carried out, potentially polluting activities.</li> </ul>	<p>Preventing contamination makes financial sense. If it does occur the polluter, or in some cases land owner, will incur considerable costs in managing it.</p> <p>Under Part 2A Regulators can serve notice requiring remediation activities to be undertaken by the polluter, land owner or could include their financial organisations.</p> <p>Regulators can recover costs incurred when they undertake remediation having regard certain tests and exclusions.</p> <p>Certain wastes from remediation are exempt from Landfill tax.</p> <p>Relief on corporation tax is available for expenditure on remediation (Finance Act 2001).</p> <p>Grants may be available from RDAs, English Partnerships, The New Deal for Communities and the European Regional Development Fund.</p>	<p>Organisations are responsible for preventing contamination by carrying out capital works that bring land up to a standard where the risk of harm to human health or the environment is acceptable. This responsibility can be enforced and in such cases costs can exceed those that would have been incurred if preventative or voluntary action had been taken. Under Part 2A where significant hardship may be caused regulators can reduce or waive some of the costs.</p> <p><b>Balance sheet impact</b> Where land is assessed and expenditure becomes assessable and likely then provision should be made in the balance sheet. Where expenditure is likely but the quantity unknown or the expenditure is less likely than not then disclosure should be made but no financial provision made.</p> <p><b>Profit and loss impact</b> Amounts paid into the balance sheet provision have direct impact on the profit and loss statement.</p>
<p><b>EU</b></p> <p>Total compliance costs within the EU are estimated at €2.9bn between 2008 and 2012. Policy changes linking emissions trading to the 'clean development mechanism' (CDM) would reduce these costs but have a negative environmental impact.</p>	<p>Energy production facilities, ferrous metal production and processing, the production of cement clinker and lime, glass and glass fibre, ceramic bricks, pulp from timber and other fibrous materials, and the manufacture of paper and board.</p>	<p>Actual carbon costs will be passed directly through to the consumer – estimates of domestic electricity bill increases range from 3% to 16%.</p> <p>The permit application fee for Installations with annual emissions of:</p> <ul style="list-style-type: none"> <li>Less than 50kt per year – £1258.</li> <li>A least 50kt and no more than 500kb – £2353.</li> <li>More than 500kt – £5616.</li> </ul> <p>Subsistence fees are:</p> <ul style="list-style-type: none"> <li>Less than 50kt per year – £2395. £1,258</li> <li>At least 50kt and no more than 500kt – £3121. £2,353</li> <li>More than 500kt – £3837.</li> </ul>	<p><b>Balance sheet impact</b> An allowance should be treated as an intangible asset (IAS 38) and should be tested for impairment (IAS 36) rather than amortised.</p> <p>If an allowance is allocated by government for less than fair value then the difference shall be treated as a Government grant – initially recognised in the balance sheet as deferred income.</p> <p>As emissions are made a liability arises for the obligation to deliver an allowance at the end of the period. This liability is a provision dealt with under IAS 37.</p> <p><b>Profit and loss impact</b> Permit and regulator subsistence charges are revenue expenditure and should be budgeted and accounted appropriately.</p> <p>Allowances allocated by Government at less than fair value will eventually be recognised as income over the compliance period. Currently allowances are allocated for free by Government. Any deficit or surplus may be either bought or sold from the carbon market.</p>

## Appendix 1: Principal directives and regulations (continued)

### Useful documents (continued)

Environmental subjects	Summary	Key related legislation		Date effective from/major milestones
		EU	UK	
Environmental impact assessment	The directive was established in 1985 to ensure that the potential environmental impacts of new proposed projects would be considered and assessed prior to a decision being made on the project going forward. The impact assessment work needs to be done by the proponents of a development project, and the resulting information and Environmental Statement needs to be considered by the decision makers prior to approving the project. The directive applies to major developments, as well as minor developments occurring in sensitive areas. Details of applicability are provided in the annexes to the directive.	1. Environmental Impact Assessment Directive (85/337/EEC, subsequently amended by 97/11/EC) and by Article 3 of Directive 2003/35/EC.	A number of EIA Regulations are in place. The most frequently applied are the Town and Country Planning (England and Wales) EIA Regulations 1999 (SI 1999/293).	1988 (introduction of the Town and Country Planning (Assessment of Environmental Effects) Regulations 1988, SI 1988/1199, now revoked).
Environmental liabilities	Aims to establish a framework for the prevention and remediation of environmental damage in accordance with the principle that the polluter pays. This includes damage to biodiversity, water and land that creates a threat to human health. In particular it should increase remediation in the UK.	Directive 2004/35/EC Of The European Parliament And Of The Council on environmental liability with regard to the prevention and remedying of environmental damage.	1. Environmental Permitting Regulations 2007. 2. Water Resources Act 1991. 3. Countryside and Rights of Way Act 2000. 4. EPA 1990 Part IIA. 5. Control of Major Accident Hazards Regulations 1999. 6. Conservation (Natural Habitats &c.) Regulations 1994. 7. Wildlife and Countryside Act 1981.	Adopted 2004 A second consultation was undertaken in May 2008. Regulations came into force in England on 1 March 2009, and Wales on 6 May 2009.
Groundwater	Aims to achieve a 'good chemical status' for groundwater, prevent deterioration in status, reverse significant, sustained upwards trends in pollution of groundwater and prevent or limit the inputs of pollutants into groundwater. 1. Member states to establish thresholds for pollutants to contribute to the assessment of good chemical status. These are not compliance standards. Thresholds set for water bodies and pollutants where there is a risk of failing WFD objectives. 2. Specific criteria for identifying and the starting points for reversing trends based on the pollutants for which thresholds are set.	1. Water Framework Directive (2000/60/EC) – Article 17 and Groundwater Daughter Directive (2006/118/EC) 2. EU Council Directive 80/68/EEC on the protection of groundwater against pollution caused by certain dangerous substances (1979).	The Groundwater Regulations 1998, the requirements of which are also currently implemented by permits and powers under the PPC, discharge consent and waste management licensing regimes. The PPC and waste management regimes migrated to the Environmental Permitting Regulations from 1 April 2008.	1979 directive to be repealed in December 2013 by the Water Framework Directive. Replaced by the Water Framework Directive and Groundwater Daughter Directive.

Total financial impact estimated (UK/EU) (where available)	Types of organisation affected	Financial impacts on organisations (description)	Financial management options
<p>Most EIAs are undertaken or financed by private proponents, putting forward development projects for approval. EIAs are undertaken by public bodies in relation to large infrastructure projects – eg, roads, rail links. Except for unusual circumstances, namely very small projects in sensitive areas, the cost of the EIA is usually a small fraction (&lt;10%) of the cost of the overall development.</p>	<p>Private development bodies, as well as public bodies putting forward development projects (eg, infrastructure).</p>	<p><b>Benefits</b></p> <ul style="list-style-type: none"> <li>• Better solutions to environmental problems.</li> <li>• Avoiding impacts and the costs of subsequent mitigation.</li> <li>• A better informed consent process.</li> <li>• Public input to development projects.</li> <li>• A smoother planning application process.</li> </ul> <p><b>Costs</b></p> <p>Data collection, analysis and modelling could result in significant costs for certain aspects of environmental assessment (eg, air quality modelling; noise modelling; flood risk modelling).</p> <p>EIA studies can cost between £30,000 to £100,000+, depending on the kind of project under consideration and the types of fieldwork and data collection and data analysis or modelling studies required. Such costs need to be included in the overall budget for proposed new developments.</p>	<p><b>Profit and loss impact</b></p> <p>Generally such assessments should be written off in the year in which the expenditure occurs.</p>
<p>Figures are at a broad estimate stage but could be significant both to regulators and to SMEs.</p>	<p>Agriculture, industry with respect to chemicals, paints/varnishes, pharmaceuticals, cleaning products, biocidal, plant protection, energy, coal, metals, minerals, pulp/paper, fibres, tanning, food processing, solvents, water, sewage, transport, waste, genetically modified organisms.</p> <p>Up to 280,000 SMEs.</p>	<p>Financial security is not a requirement of the directive but should be ‘encouraged’ by member states. This includes insurance although it is possible that insurance will be too expensive for most businesses to take it out. Another possibility is for cover by bonding, finite risk and other forms of non-insurance assurance.</p>	<p><b>Balance sheet impact</b></p> <p>Financial provision is not required but encouraged.</p> <p>Non-insurance provisions such as bonds may be considered.</p> <p><b>Profit and loss impact</b></p> <p>Insurance is a possibility and specialist environmental insurers do exist for the purpose. This is likely to be very expensive for SMEs. Insurance premiums would be revenue expenditure making an annual impact on the profit and loss statement.</p>
<p>Although the new legislation can be no less protective to groundwater than 80/68/EEC, the new directives are more risk-based and can be implemented more flexibly. The costs to stakeholders are still under assessment but are likely to be less than £20m in England and Wales.</p>	<ul style="list-style-type: none"> <li>• All organisations with land holdings.</li> <li>• Organisations that emit, or have the potential to emit, pollutants.</li> </ul>	<p>Likely to be low. See total financial impact column.</p>	<p><b>Balance sheet impact</b></p> <p>Organisations are responsible for any capital investment made to ensure that operations do not input pollutants to groundwater that could cause pollution or otherwise threaten Water Framework Directive objectives. This investment appears as a balance sheet asset.</p> <p>Clean up costs as a result of falling outside the legislation may be capital based and so have a similar balance sheet impact.</p> <p><b>Profit and loss impact</b></p> <p>Capital investment as described above has a lasting impact on the profit and loss statement as the asset is depreciated over a number of years.</p> <p>Other costs may be incurred to avoid inputs to groundwater that are not capital in nature – for example staff costs. These costs have a direct impact on the profit and loss statement.</p> <p>Fines incurred should also be paid from revenue and so have a direct impact on profits.</p>

## Appendix 1: Principal directives and regulations (continued)

### Useful documents (continued)

Environmental subjects	Summary	Key related legislation		Date effective from/major milestones
		EU	UK	
IPPC	<p>Integrated pollution prevention and control gives a common set of rules for permitting industries and the best available techniques methodology for granting permits. Permits must take into account whole environmental impact. New installation must meet the standards but existing implementations were given eight years from 1999.</p> <p><b>End of Life Vehicles Directive</b> Aims to reduce the waste from end-of-life vehicles. It restricts the use of certain materials in manufacture, requires authorised sites for dismantling and improved recycling processes. It makes manufacturers and importers responsible for take-back and treatment of vehicles.</p> <p><b>Waste Incineration Directive</b> Aims to minimise impact of emissions to air, soil, surface and ground water from the incineration and co-incineration of waste.</p> <p><b>Revised Waste Framework Directive</b> Sets a framework and standardises terms. Led to national waste strategies. Puts emphasis on waste minimisation and reuse and recycling. Follows the polluter pays principle.</p>	<ol style="list-style-type: none"> <li>1. EU Directive (96/61/EC) concerning Integrated Pollution Prevention and Control.</li> <li>2. EU Directive (2008/1/EC) concerning Integrated Pollution Prevention and Control.</li> <li>3. End of Life Vehicles 2000/53/EC.</li> <li>4. Waste Incineration Directive 2000/76/EC.</li> <li>5. Directive on Waste (75/442/EC) as amended (91/156/EC).</li> <li>6. Directive on Waste (2006/12/EC) replacing the previously amended Directive (75/442/EC).</li> <li>7. Directive on Hazardous Waste (91/689/EEC).</li> </ol>	<ol style="list-style-type: none"> <li>1. The Environmental Protection Act 1990.</li> <li>2. The Control of Pollution (Amendment) Act 1989.</li> <li>3. The Waste Management Licensing Regulations 1994 (as amended).</li> <li>4. The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991.</li> <li>5. Waste Incineration (England and Wales) Regulations 2002.</li> <li>6. Pollution Prevention and Control Act 1999.</li> <li>7. Proposed amendment of above by 2007.</li> <li>8. End of Life Vehicles Regulations 2003.</li> <li>9. Hazardous Waste (England and Wales) Regulations 2005.</li> <li>10. Lists of Wastes (England) Regulations 2005.</li> </ol>	<p><b>IPPC</b> Implementation of risk-based regulation and charging for IPPC was to be by April 2003. Requirements for permits were phased in until coverage was completed by the end of 2007/08.</p> <p><b>End of Life Vehicles Directive</b> Applies to vehicles sold after 1 July 2002 but did not take effect until 2007.</p> <p><b>Waste Incineration Directive</b> Regulations took effect immediately (2002) for new incinerators and from December 2005 for existing installations.</p> <p><b>Waste Framework Directive</b> Original directive issued 1975. Most recent decisions in 1996 and 1999 and revised in 2009 (2008/98/EC). National Waste Strategy reviewed 2007.</p>
Strategic environmental assessment	<p>The objectives of the directive are 'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development' (Article 1 of the Directive).</p> <p>It is the task of the responsible authority, ie, the body which prepares and/or adopts the plan or programme to identify and assess the potential impacts of the plan/programme, and to use the information in shaping and finalising this, using independent viewpoints if possible.</p>	<ol style="list-style-type: none"> <li>1. Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment ('the SEA Directive').</li> </ol>	<p>The Environmental Assessment of Plans and Programmes Regulations (SI 2004/1633 England and SI 2004/1656 Wales).</p>	<p>2004</p>

Total financial impact estimated (UK/EU) (where available)	Types of organisation affected	Financial impacts on organisations (description)	Financial management options
<p><b>IPPC</b></p> <p>Total impact neutral but redistribution among industries. Many businesses will pay less in the UK. However landfill charges will rise from £5,000 to around £15,000 (total impact approximately £10m). Also the food and drink sector will be new to regulation with a total cost of approximately £10m.</p>	<p><b>IPPC</b></p> <p>Holders of IPPC permits – a wide range of industry sectors. Those especially affected adversely by charge increases include landfill, fuel from waste, coating, printing and textile treatment, timber, animal and vegetable matter and food, intensive livestock.</p> <p><b>End of Life Vehicles Directive</b></p> <p>Manufacturers, importers, component manufacturers, salvage operators etc. There are 36 vehicle manufacturers selling in the UK and 9 vehicle producers. There about 7,000 component manufacturers, 90% SMEs.</p> <p><b>Waste Incineration Directive</b></p> <p>Incinerator operators excluding those burning animal carcasses and many burning vegetable and wood waste.</p>	<p><b>IPPC</b></p> <ol style="list-style-type: none"> <li>1. Operator costs in completing Environmental Protection Operator Performance Risk Appraisal spreadsheets (estimate from £50 to £400 per installation dependant on size and familiarity with guidance).</li> <li>2. Permit application charges increases for industries adversely affected by between 40% and over 200%. Many others benefit.</li> <li>3. Annual subsistence charges to the Environment Agency increases for same industries as in point 2 by up to 85%. Many others benefit.</li> </ol> <p><b>End of Life Vehicles Directives</b></p> <p>Estimates of one-off costs of £500m for re-engineering and retooling.</p> <p>Each vehicle requires a Certificate of Destruction (CoD) and estimates for the cost of these £3-£8 per vehicle, approximately £6m-£16m per annum. Other costs relating to IT etc are considered to be minor.</p> <p><b>Waste Incineration Directive</b></p> <p>No estimates found but significant tightening of regulations is likely to lead to increased capital and operating costs. Costs should be recovered though increased prices for the consumer.</p>	<p><b>Balance sheet impact</b></p> <p><b>IPPC</b></p> <p>Minor impacts resulting from valuation of capital funded installations. Existing installations may require capital work to meet new standards. New installations will have any extra cost of meeting standards built in.</p> <p><b>End of Life Vehicles Directive</b></p> <p>Up front costs of re-engineering and retooling will increase asset values.</p> <p><b>Waste Incineration Directive</b></p> <p>Up front costs of re-engineering and retooling will increase asset values.</p> <p><b>Profit and loss impact</b></p> <p><b>IPPC</b></p> <p>All the expenditures identified are revenue expenditure that should be budgeted for. As such they have a direct impact on the profit and loss account.</p> <p><b>End of Life Vehicles Directive</b></p> <p>CoD costs will impact profit and loss accounts. Depreciation of the capital spent on re-engineering will impact depending on individual depreciation policies.</p> <p><b>Waste Incineration Directive</b></p> <p>Any increased operating costs resulting from tightening of operating regimes will hit the profit and loss.</p>
<p>Most SEAs are carried out by public sector organisations. Prior to the directive, these organisations were required take heed of environmental considerations when developing plans, through a simple sustainability checklist. The SEA represents a more formal requirement with potential greater cost implications.</p> <p><b>Benefits</b></p> <p>There should be improvements to be gained through SEA, partly through better information, partly through avoiding adverse environmental effects and partly because planning consents should be faster.</p> <p><b>Costs</b></p> <p>Currently costs of SEAs in for local authority development plans are estimated at between suggest £25-£30,000 per plan. This is an increase on the sum previously spent on addressing environmental issues of plans under previous legislation. There are around 800 UK development plans which should be replaced over a five year period (from 2004), leading to official estimates of costs of £2-4m per annum. Part of this was already incurred by compliance with legislation prior to introduction of the SEA Directive.</p> <p>Additionally regional plans are estimated to add a further £1m per annum and central Government plans and programmes £3m-£20m.</p>	<p>The SEA Directive does not apply to plans prepared by private bodies. The only exception is water companies' water resources management plans. This is because water companies are privately owned but subject to regulation and approval by government.</p>	<p><b>Benefits</b></p> <p>Benefits should lead to better solutions to environmental problems or enable impacts to be avoided and the costs of subsequent mitigation or remediation measures to be saved. By consulting with the public, organisations may be able to address concerns before they arise.</p> <p>Comparability across the EU, with more consistent plans should make it easier for developers to secure consents.</p> <p><b>Costs</b></p> <p>Because of the strategic nature of SEA, no significant fieldwork is expected to be required. Organisations and public bodies are already likely to hold much of the necessary environmental data, and they could rely on established methods of analysis. Substantial new work may take place every few years with estimates of the cost of environmental studies at this level ranging from £50,000 to £200,000.</p> <p>Public consultation, using established methods such as opinion surveys and publication of consultation papers seeking views lie in the range £20-£50,000. More expensive approaches may cost between £50,000 and £100,000, but may produce significant savings at later stages.</p> <p>By assuming 25 environmental assessments each year, the overall cost would lie in the range of £2m-£8m (the totals of the maxima and minima of the cost ranges above).</p>	<p><b>Profit and loss impact</b></p> <p>Generally such assessments should be written off in the year in which the expenditure occurs.</p>

## Appendix 1: Principal directives and regulations (continued)

### Useful documents (continued)

Environmental subjects	Summary	Key related legislation		Date effective from/major milestones
		EU	UK	
Water policy	<p><b>Water framework</b></p> <p>Aims to protect inland surface waters, transitional waters, coastal waters and groundwater. In particular:</p> <ul style="list-style-type: none"> <li>• aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems;</li> <li>• sustainable water use;</li> <li>• the aquatic environment reducing discharges, emissions and losses of priority substances;</li> <li>• reduction of pollution of groundwater; and</li> <li>• mitigating the effects of floods and droughts, and thereby contributing to:</li> <li>• the provision of the sufficient supply of good quality surface water and groundwater as needed for sustainable, balanced and equitable water use;</li> <li>• a significant reduction in pollution of groundwater;</li> <li>• the protection of territorial and marine waters.</li> </ul> <p><b>Water Supply Regulations</b></p> <p>The Water Supply Regulations are sometimes known as the Drinking Water Directive and aim to improve human health.</p>	<ol style="list-style-type: none"> <li>1. Directive 2000/60/EC – The Water Framework Directive.</li> <li>2. EU Council Directive 80/68/EEC on the protection of ground water against pollution caused by certain dangerous substances (1979). Daughter Directives on priority substances and groundwater spawned from Articles 16 and 17 of the Water Framework Directive.</li> <li>3. Directives to be repealed by the WFD: <ul style="list-style-type: none"> <li>– Directive 75/440/EEC of the 16 June 1975 concerning the quality required of surface water intended for the abstraction of drinking water in member states as last amended by Directive 91/692/EEC.</li> <li>– Council decision 77/795/EEC of the 12 December 1977 establishing a common procedure for the exchange of information on the quality of surface water in the community as last amended by the 1994 Act of Accession.</li> <li>– Directive 79/869/EEC of the 9 June 1979 concerning the methods of measurement and frequencies of sampling and analysis of surface water intended for the abstraction of drinking waters in member states as last amended by the 1994 Act of Accession.</li> <li>– Directive 78/659/EEC of the 18 July 1978 on the quality of freshwaters needing protection or improvement in order to support fish life as last amended by the 1994 Act of Accession.</li> <li>– Directive 79/923/EEC of the 30 October 1979 on the quality required of shellfish waters as amended by Directive 91/692/EEC.</li> </ul> </li> </ol>	<p>Water Framework Directive (22 December 2000).</p> <p>Main laws and regulations in effect (2003).</p> <p>River Basin Management Plans by December 2009.</p> <p>Environmental objectives met by 2015.</p> <p>Reviewed in six-yearly cycles thereafter.</p> <p>Water Supply (Water Quality) Regulations came into effect December 2003.</p> <p>The Private Water Supplies Regulations (2008).</p>	<p>Water Framework Directive (22 December 2000).</p> <p>Main laws and regulations in effect (2003).</p> <p>River Basin Management Plans by December 2009.</p> <p>Environmental objectives met by 2015.</p> <p>Reviewed in six-yearly cycles thereafter.</p> <p>Water Supply (Water Quality) Regulations came into effect December 2003.</p> <p>The Private Water Supplies Regulations (2008) come into force 2009.</p>

Total financial impact estimated (UK/EU) (where available)	Types of organisation affected	Financial impacts on organisations (description)	Financial management options
<p><b>Benefits</b></p> <p><b>Water framework</b> Improved river quality benefits estimated at between £650m and £1200m. Groundwater unquantifiable at the moment.</p> <p><b>Water supply benefits</b> Health benefits are difficult to quantify but are expected to be significant (&gt;£100mi).</p> <p><b>Costs</b></p> <p><b>Water framework</b> Total costs are estimated at around £1000m phased over several years. Net costs – costs less benefits may be very small.</p>	<p><b>Water framework</b> Primarily the legislation will impact water and farm-based businesses. Any industry or public body whose activities potentially impact water quality, quantity or the physical habitat of aquatic systems could be affected. This includes discharges, development and abstractions.</p> <p><b>Water supply</b> Water supply regulations impact the 9 water and sewerage companies plus the 15 water supply companies. Other businesses may face increased bills as costs are passed on to the consumer.</p>	<p>It is not possible at the moment to provide detailed costs for the preferred implementation option.</p>	<p><b>Balance sheet Impact</b></p> <p><b>Water framework</b> Point source removal of pollutants may require significant capital investment by organisations. This investment appears as a balance sheet asset. Clean up costs as a result of falling outside the regulations may be capital based and so have a similar balance sheet impact.</p> <p><b>Water supply</b> Water supply capital costs will have an impact on assets where improvements to plant or new plant for purification will appear.</p> <p><b>Profit and loss impact</b></p> <p><b>Water framework</b> Capital investment as described above has a lasting impact on the profit and loss statement as the asset is depreciated over a number of years. Other costs may be incurred to avoid emissions that are not capital in nature – for example staff costs. These costs have a direct impact on the profit and loss statement. Fines incurred should also be paid from revenue and so have a direct impact on profits.</p> <p><b>Water supply</b> Water supply operating costs will appear in the profit and loss statement and will be met by improved efficiencies and increased charges. Depreciation of capital costs will impact depending on individual company depreciation policies.</p>

## Appendix 1: Principal directives and regulations (continued)

### Useful documents (continued)

Environmental subjects	Summary	Key related legislation		Date effective from/major milestones
		EU	UK	
Water policy (continued)		<ul style="list-style-type: none"> <li>– Directive 80/68/EEC of the 17 December 1979 on the protection of groundwater against pollution caused by certain dangerous substances.</li> <li>– Directive 76/464/EEC on pollution caused by certain dangerous substances discharged into the aquatic environment of the community, together with a number of daughter directives enacted pursuant to it.</li> </ul> <p>4. Quality of water intended for human consumption (1998/83/EC).</p>		
WEEE (Waste from Electrical and Electronic Equipment)	<ul style="list-style-type: none"> <li>• Main objectives to increase the separate collection, treatment and recovery of WEEE.</li> <li>• Covers household and non-household equipment but different financing arrangements for each.</li> <li>• Requires that householders can return WEEE to retailers or designated collection facilities free of charge.</li> <li>• Producers must register and finance the treatment and recovery of household WEEE on a collective basis according to their market share for new electrical and electronic equipment (EEE).</li> <li>• Arrangements for non-household equipment are more complicated: (i) for waste from equipment purchased before 13 August 2005, the end user is responsible for treatment and recycling, unless they are buying replacement products in which case the producer supplying the new equipment will have these responsibilities; (ii) for equipment put on the market after 13 August 2005, the producer supplying that equipment will have to take responsibility unless both parties negotiate alternative arrangements.</li> </ul>	<ol style="list-style-type: none"> <li>1. Directive 2002/96/EC Of The European Parliament And Of The Council On Waste From Electrical And Electronic Equipment.</li> <li>2. Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (ROHS) (Directive 2002/95/EC).</li> </ol>	<ol style="list-style-type: none"> <li>1. The Waste Electrical and Electronic Equipment (WEEE) Regulations 2006 – UK SI 2006/3289 <ul style="list-style-type: none"> <li>– cover product marking, take-back and recycling obligations, etc for the UK.</li> </ul> </li> <li>2. The WEEE (Amendment) Regulations 2007 (SI 2007/3454).</li> <li>3. The Waste Electrical and Electronic Equipment (Waste Management Licensing) (England and Wales) Regulations 2006 SI 2006/3315 <ul style="list-style-type: none"> <li>– cover treatment and site licensing in England and Wales</li> <li>– separate provisions for Scotland and Northern Ireland.</li> </ul> </li> <li>4. Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2005 (RoHS). <ul style="list-style-type: none"> <li>New 2008 regulations (SI 2008/37) came into force on 1 February 2008.</li> </ul> </li> </ol>	<p>15 March 2007 deadline for producers to join a Producer Compliance Scheme.</p> <p>Separate collection, treatment and recycling began on 1 July 2007.</p> <p>RoHS is effective from 1 July 2006.</p>

Total financial impact estimated (UK/EU) (where available)	Types of organisation affected	Financial impacts on organisations (description)	Financial management options
<p><b>WEEE</b> Estimates range from £205m – £443m.</p>	<p>EEE producers including: importers and manufacturers, distributors of household EEE, local authorities and their waste contractors, non-household end-users, dismantlers, reproducers and refurbishers.</p> <p><b>ROHS</b> Producers of electrical and electronic equipment.</p>	<p>Total cost estimates for processes are as follows: Collection: £29m-£98m Treatment: £98m-£207m Recovery: £51m-£114m Information for users: £18m Information for treatment facilities: £7m Transposition: £28-£97m</p> <p><b>ROHS</b> No RIA given. Presumable costs may be needed for re-engineering and re-tooling.</p>	<p>Producers of electrical and electronic equipment will generally finance the collection, treatment and recycling of WEEE through producer compliance schemes.</p> <p>End-users of non-household equipment will need to build asset replacement/disposal plans into their procurement policies.</p> <p><b>Balance sheet impact</b> <b>WEEE</b> Some producers may establish their own take-back systems for non-household equipment. Setting up such a system may incur capital expenditure especially if it requires the purchase of land and hardware. This will appear on the balance sheet as fixed assets.</p> <p><b>RoHS</b> Engineering/retooling costs would be capital and so add to the asset base on the BS.</p> <p><b>Profit and loss impact</b> Any capital expenditure affecting the balance sheet will be depreciated over a number of years thus impacting the profit and loss statement.</p> <p>Running systems will come under the normal revenue operation of an organisation and so have a direct profit and loss impact.</p> <p><b>RoHS</b> Additional expenditure may be incurred as a result of operational changes. Depreciation of capital spend with increase year-on-year costs.</p> <p>Costs will ultimately be reflected in the purchase price of goods covered by the legislation.</p>

## Appendix 2: Overview of accounting standards and their environmental implications

(Compiled by Duncan Dicks, Meadows Consultancy Ltd on behalf of the Environment Agency and PwC on behalf of the ICAEW)

### Statements of Standard Accounting Practice

SSAP Number	Title	Environmental implications and examples
SSAP 4 (IAS 20)	<i>Accounting for government grants</i>	Businesses are increasingly eligible to apply for government grants if they have projects that meet environmental/sustainability criteria. In this case once the conditions for receiving the grant are met the grant should be matched with the specified expenditure. In other cases the grant is contingent on achieving certain objectives, for example a reduction in emissions or consumption or the creation of jobs. In this case the grant should be matched with the identifiable costs of achieving that objective. This ensures that environmental costs, benefits and associated grants are recognised in the same time periods.
SSAP 5	<i>Accounting for value added tax</i>	VAT is a tax on the supply of goods and services which is eventually borne by the final consumer but usually collected at each stage of the production and distribution chain. There are two types of VAT trading – taxable and exempt. There are three rates of taxable VAT – standard (15%), reduced (5%) and zero-rated (0%). Traders in exempt items cannot recover VAT paid on their inputs. The categories have no environmental relationship although organisations should be aware of the possible variable effect of VAT on different environmental expenditure.
SSAP 9	<i>Stocks and long-term contracts</i>	Stocking policy is of some environmental significance for two reasons. Overstocking may use more raw materials than is necessary AND holding stocks for the long term can lead to wastage, and for some products potential leakage with associated costs. SSAP 9 requires stocks to be valued at the lower of cost and ‘net realisable value’ – this means that the balance sheet will never show a higher value than the original cost of the stock. The longer stock is held the longer the profit is deferred. In addition, holding excessive stocks means cash is tied up in working capital rather than being able to be put a better use. Therefore, environmental and financial objectives are consistent.
SSAP 13	<i>Accounting for research and development</i>	Environmentally-related research into new energy sources, for example, will always be written off in the year in which it is incurred in its early stages. When it reaches the stage of building a first-of-a-kind running generator, for example, then the development work can be treated as part of the final asset so long as conditions are met meeting the definition of an asset – that is, there is an expectation of economic benefit in the future based on a past event. If this is the case then the development costs can be amortised over the expected useful economic life of the asset.
SSAP 19	<i>Accounting for investment properties</i>	Investment properties should be included in the balance sheet at their open market value. A proper market valuation requires an entity to have undergone a thorough contaminated land assessment.
SSAP 21 (IAS 17)	<i>Accounting for leases and hire purchase contracts</i>	Users of accounts need to have a proper understanding of the substantive ownership of assets and this is particularly true where environmental issues are concerned. In making a judgement on responsibility for environmental risk or liability, SSAP 21 makes it clear that substantively, a lease contract may be placing the asset under control of the entity.
SSAP 25	<i>Segmental reporting</i>	SSAP 25 concentrates on providing more information to assist the users of financial statements by segmenting information by class of business or geographically. When deciding whether or not an entity operates in different classes of business, the following factors need to be considered: the nature of the products or services, the nature of the production processes, the markets in which the products or services are sold, the distribution channels for the products, the manner in which the entity’s activities are organised, and any separate legislative framework relating to part of the business. Therefore, an entity’s business interests may have widely different environmental impacts, for example some businesses operate in a range of utility sectors such as water and energy distribution. In this case showing the position and performance in the sectors separately is important to an understanding of their likely environmental impacts. In addition, geographical analysis can provide a user of the financial statements with information to see where, for example, different geographical segments can be impacted by different environmental legislation.

## Financial Reporting Standards and International Comparatives

FRS Number	Title	Environmental implications and examples
FRS 1	<i>Cash flow statements</i>	This FRS is in place to ensure the financial position and profit or loss (or income and expenditure) of the company is given. Thus, any environmental costs will need to be incorporated into the correct disclosure categories of the cash flow statement.
FRS 2	<i>Accounting for subsidiary undertakings</i>	This FRS requires a parent undertaking to provide financial information about the economic activities of their group by preparing consolidated financial statements, hence reflecting the environmental position as at that point in time.
FRS 3 (IAS 1)	<i>Reporting financial performance</i>	Environmental knowledge of elements of the business can be compared with the financial impact of ongoing operations, acquisitions and discontinued operations. There is no mandatory disclosure of actual environmental impacts (in FRS 3 although, for listed companies, there is in the Companies Act 2006) so that the detailed financial information can only be matched with a general understanding of the type of environmental impacts expected. FRS 3 requires the separate disclosure of the results of continuing operations, acquisitions and discontinued operations. Under the headings of continuing and discontinued operations FRS 3 requires separate disclosure of exceptional items either in a note or on the face of the profit and loss account. This should be credited or charged when arriving at the profit or loss on ordinary activities. Three 'super-exceptional' items should be shown below operating profit and before interest: profit/loss on sale or termination of an operation, costs of fundamental reorganisation or restructuring and profit/loss on disposal of fixed assets.
FRS 4	<i>Capital instruments</i>	FRS 4 ensures that costs associated with redeemable capital instruments are allocated to accounting periods on a fair basis over the period the instrument is in issue, and that the financial statements provide relevant information concerning the nature and amount of the entity's sources of finance. FRS 4 does not apply to those entities that apply FRS 26.
FRS 5	<i>Reporting the substance of transactions</i>	This FRS reflects a general principle of the ASB, which is that accounts should clearly show the user the substance of an entity's financial position and performance. The commercial effect of the entity's transactions and any resulting assets, liabilities, gains or losses, should be faithfully represented in its financial statements.
FRS 6	<i>Acquisitions and mergers</i>	This standard sets out whether a business combination should be accounted for using acquisition accounting or merger accounting. It requires a table to be shown for the acquired entity showing the book values in the acquired entities books prior to acquisition, fair value adjustments and the reasons and the new fair values. Under acquisition accounting, the acquired assets and liabilities should be included in the acquirer's consolidated balance sheet at their fair value at the date of acquisition. Under merger accounting, the book values of the assets and liabilities of the parties are used, with any adjustments to ensure uniform accounting policies.
FR 7	<i>Fair values in acquisition accounting</i>	Fair value of an asset is the value that it would be exchanged in an arm's-length transaction. This requires a proper valuation of all significant assets and liabilities. This means that the risk or actuality of environmental contamination or non-compliance must be included in the value of an asset.
FRS 8	<i>Related party disclosures</i>	This standard sets out the requirement for the disclosure of related party transactions. Any environmental companies that are perceived as related to the reporting entity will be captured in this standard.
FRS 9	<i>Associates and joint ventures</i>	This standard sets out the requirements for accounting for associates and joint ventures (for consolidated accounts using the equity method) – this may have an environmental impact in relation to the fair value of assets and liabilities on acquisition or if the associate or joint venture were to be revalued. This would include the research and development costs that have been incurred by the associate or joint venture.
FRS 10 (IAS 38/ IFRS3)	<i>Goodwill and intangible assets</i>	Under the 'full market approach' and the 'cost of settlement approach' the allowances in a cap and trade emissions trading scheme may be treated as intangible assets. As such they should be disclosed, described and the individual carrying amounts reported.
FRS 11 (IAS 36)	<i>Impairment of fixed assets and goodwill</i>	An event that causes the reduction in value of a fixed asset is known as an impairment. This could be due to an environmental incident or a change in environmental legislation. FRS 11 requires that such assets should be written down immediately hence reflecting the reality of the environmental position. The impairment loss should be recognised in the profit and loss account.

## Financial Reporting Standards and International Comparatives (continued)

FRS Number	Title	Environmental implications and examples
FRS 12 (IAS 37)	<i>Provisions, contingent liabilities and contingent assets</i>	<p>It is often the case that environmental liabilities, related to waste, pollution etc are difficult to forecast either because of uncertainties over timing or value or both. Typical examples would be long-term waste (such as radioactive waste) where the plan is to carry out some waste management process in the far future and the technology may be unknown, and contaminated land where the cost of remediation may not be clear until the work has begun. In both these cases it is clear that there will be some transfer of economic benefits to satisfy an obligation and so provision should be made when reliable estimates can be made and there is an obligation to undertake the work. Where reliable estimates cannot be made then narrative disclosure is still required.</p> <p>The accounting policy chosen for emissions obligations will depend on the overall accounting model that is being used for emissions and hence impact on the liabilities measured. For example, a provision must be made as pollution is emitted equal to the value of the allowances required to cover the pollution (or the fines to be paid if there are insufficient allowances).</p>
FRS 15	<i>Tangible fixed assets</i>	<p>Land, plant and machinery and vehicles are significant environmentally sensitive fixed assets in that they are either natural assets or contribute to the 'environmental impairment' of natural assets. FRS 15 ensures that such assets are valued properly and consistently and that proper disclosure is made. The value of these assets is shown in the balance sheet and the assets are usually depreciated over their useful economic life. Fixed assets should initially be valued at cost. Revaluation is optional in the standard. However if a decision is made to revalue one asset then all other assets in the same class must be revalued. Revaluation should take into account the impact of environmental factors and environmental legislation. For example, plant that no longer meets environmental regulations would be valued at the lower of cost and recoverable amount (the higher of net realisable value or its value in use). In either case the cost of bringing the plant up to the regulation specification would have an impact on its valuation.</p>
FRS 16	<i>Current tax</i>	<p>This standard focuses on how current tax, in particular withholding tax and tax credits, should be reflected in financial statements. The timing and type of the transactions will have an impact on the taxable treatment (either current or deferred tax impact). For example, environmental research costs would be recognised as an expense in the accounting period, but may not be permitted as a deduction in determining the taxable profit (or loss).</p>
FRS 17	<i>Retirement benefits</i>	<p>FRS 17 sets out the rules regarding measurement and disclosure of retirement benefits and is therefore expected to have a limited impact on the environment. However, assumptions used to measure the assets and liabilities used in calculating the fair value may be impacted by socio-economic environmental factors.</p>
FRS 18 (IAS 8)	<i>Accounting policies</i>	<p>Assets and liabilities, for example, can have great environmental impact and the accounting treatment of them can vary within the limits of the existing standards. One example would be the revaluation a certain class of assets. Revaluing land on a regular basis would mean for example that the carrying value on the balance sheet would more closely reflect its real, commercial value taking into account environmental incidents, contamination and remediation. Even at cost, these environmental incidents may give rise to an impairment. In addition, there is the likelihood that the corresponding obligation would need to be recorded within the financial statements. The disclosure of such accounting policies is critical to a proper understanding of the accounts and for comparison of different organisations. This applies equally to the environmental significance.</p>
FRS 19	<i>Deferred tax</i>	<p>This standard aims to ensure that future tax consequences of past transactions and events are recognised as liabilities or assets in the financial statements and that the financial statements disclose any other special circumstances that may have an effect on future tax charges. It is unlikely that this standard will have an environmental impact.</p>
FRS 20	<i>Share based payments</i>	<p>This standard requires an entity to reflect in its profit and loss and financial position the effect of share-based transactions including expenses associated with transactions in which share options are granted to employees. This standard is unlikely to have any environmental impact.</p>

## Financial Reporting Standards and International Comparatives (continued)

FRS Number	Title	Environmental implications and examples
FRS 21 = IAS 10	<i>Events after the balance sheet date</i>	The distinction made in this standard can be illustrated by environmental examples. An entity might become aware shortly after the end of its financial reporting year of a pollution incident, for example seepage of chemicals, that has gone undetected for some time (before the balance sheet date). In so far as the financial implications are assessable then this relates to a condition that existed before the balance sheet date and the accounts must be adjusted to recognise the event. Alternatively the effects of an environmental incident, for example an offshore oil spillage, occurring after the balance sheet date should not be recognised no matter how significant. If such non-adjusting events are material and non-disclosure could influence users then the entity should disclose the nature of the event and an estimate of its financial effect, or a statement that such an estimate cannot be made.
FRS 22	<i>Earnings per share</i>	This standard deals with the requirements for disclosure of EPS for entities whose shares are publicly traded, or which are in the process of issuing shares to the public markets. This standard is unlikely to have any environmental impact.
FRS 23	<i>The effects of changes in foreign exchange rates</i>	This standard deals with the accounting for transactions and balances in foreign currencies, of translating the results and financial position of foreign operations and translating an entities results and financial position into a presentation currency. Accordingly, the impact on the environment of this standard is expected to be limited.
FRS 24	<i>Financial reporting in hyperinflationary economics</i>	FRS 24 deals with the situation when companies are reporting in the currency of a hyper inflationary economy. The standard requires the financial statements to be prepared based on the measuring unit current at the balance sheet date. Comparative amounts are also restated into the measuring unit at the balance sheet date.
FRS 25 (Dec 2004 = IAS 32)	<i>Financial instruments: disclosure and presentation. Disclosure requirements replaced by FRS 29.</i>	The introduction of emissions trading leads to tradeable allowances, which naturally become a possible financial instrument for the laying off of risk. FRS 25 deals with establishing the principles for presenting financial instruments as liabilities or equity and for offsetting financial assets and financial liabilities. It also applies to the classification of financial instruments, and the circumstances in which financial assets and liabilities should be offset.
FRS 26 = IAS 39	<i>Financial instruments: measurement</i>	The introduction of emissions trading leads to tradeable allowances, which naturally become a possible financial instrument for the laying off of risk. FRS 26 (IAS 39) therefore naturally provides some framework for the treatment of such tradeable instruments unless, and until, a specific standard or other guidance is written. However, most entities are able to make use of the 'own-use' exemption for emissions trading allowances and only need to account under FRS 26 (if this standard is applicable to them) and fair value the allowances if they are actually trading allowances over and above what they need in their ordinary course of business.
FRS 27	<i>Life assurance</i>	FRS 27 sets out the accounting treatment and disclosure for all entities that have a life assurance business, including a life reinsurance business.
FRS 28	<i>Corresponding amounts</i>	Requires disclosure of corresponding amounts, enabling users of the accounts to see more clearly the detail of changes from year to year and to explain them in the notes. Where figures relate to areas of environmental impact this either improves the level of disclosure or clarifies the need for it.
FRS 29 (IFRS 7 with IAS 1)	<i>Financial instruments: disclosures</i>	If an organisation is significantly affected by the risk associated with its use of emissions trading would require additional disclosure.

## Extant Urgent Issues Task Force Abstracts

UITF Number	Title	Environmental implications and examples
UITF Abstract 4	<i>Presentation of long-term debtors in current assets</i>	Long-term (greater than one year) debtors can include deferred consideration for fixed assets. The abstract ensures clearer presentation enabling the user to better match the impact of financial transactions with the actual transfer of assets that have environmental impact.
UITF Abstract 5	<i>Transfers from current assets to fixed assets</i>	Where assets are transferred from current to fixed, the current asset accounting rules should be applied up to the effective date of transfer, which is the date of management's change of intent. Consequently the transfer should be made at the lower of cost and net realisable value, and accordingly an assessment should be made of the net realisable value at the date of transfer and if this is less than its previous carrying value the diminution should be charged in the profit and loss account, reflecting the loss to the company while the asset was held as a current asset.
UITF Abstract 9	<i>Accounting for operations in hyper-inflationary economies</i>	This abstract ensures that appropriate adjustments are made where distortions arise from very high rates of inflation ('hyper-inflation'), when looking at the group financial statements. It is unlikely that this abstract will have an environmental impact.
UITF Abstract 11	<i>Capital instruments: issuer call options</i>	Superseded by FRS 26 for entities adopting that standard but continues to apply in all other cases. The terms of a capital instrument sometimes include an issuer call option, that is, a right of the issuer (but not the investor) to redeem the instrument early, usually on the payment of a premium. Such an option is included primarily to preserve the financial flexibility of the issuer.
UITF Abstract 15	<i>Disclosure of substantial acquisitions</i>	This abstract clarifies the reference in FRS 6 that Class 1 transactions should be interpreted as meaning those business combinations in which any of the ratios set out in the London Stock Exchange Listing Rules for the classification of transactions exceeds 15%. This abstract is unlikely to have any environmental impact.
UITF Abstract 19	<i>Tax on gains and losses on foreign currency borrowings that hedge an investment in a foreign enterprise</i>	The UITF considered how any tax effect of gains and losses on exchange differences on borrowings that are reported in the statement of total recognised gains and losses should be recognised. It concluded that such tax effects should also be reported in the statement of total recognised gains and losses.
UITF Abstract 21	<i>Accounting issues arising from the proposed introduction of the euro</i>	This abstract deals with the introduction of the euro and the impact that this will have on: (a) the costs incurred in connection with the introduction of the euro being charged as an expense or capitalised as an asset and what disclosure is appropriate; (b) the impact the irrevocable locking of national currencies of participating member states to the euro have on cumulative foreign exchange translation differences that have been recognised in periods before the introduction of the euro; and (c) the impact the irrevocable locking of national currencies of participating member states to the euro have on anticipatory hedging instruments existing at the date of introduction of the euro in respect of future transactions. It is unlikely that the introduction of this abstract will have an environmental impact.
UITF Abstract 22	<i>The acquisition of a Lloyd's business</i>	The UITF reached a consensus that, on the acquisition of a Lloyd's managing agent, the identifiable assets and liabilities to be recognised include all profit commissions receivable in respect of periods before the acquisition, including those relating to years that are not yet closed.
UITF Abstract 23	<i>Application of the transitional rules in FRS 15</i>	Given, FRS 15 has been in place for accounting periods ending on or after 23 March 2000, then this abstract is no longer relevant.
UITF Abstract 24	<i>Accounting for start-up costs</i>	It is possible that in the commissioning stage of an asset, before normal operating skills have been developed, environmental impacts may be apparent and clean-up/maintenance costs may be incurred. The abstract ensures that such costs should not be added to the initial cost of the asset and should be recorded on a basis consistent with similar costs incurred as part of the entity's ongoing activities.
UITF Abstract 25	<i>National Insurance contribution on share option gains</i>	This abstract deals with the issue of whether the employer should accrue for the estimated liability between the grant date and the exercise date, which is when it becomes payable, and, if so, how the liability should be calculated. It is unlikely that this has an environment impact.

## Extant Urgent Issues Task Force Abstracts (continued)

UITF Number	Title	Environmental implications and examples
UITF Abstract 26	<i>Barter transactions for advertising</i>	An entity such as a publisher or broadcaster may agree to provide advertising in exchange for advertising services provided by its customer, rather than for a cash consideration. For example, it has recently become common for companies that provide commercial websites to display advertisements in exchange for advertising of their own services on another website. Such an exchange gives rise to the question of what amount, if any, should be included in reported turnover and expense. The UITF decided that it would not be appropriate to recognise turnover and costs in respect of barter transactions for advertising unless there is persuasive evidence of the value at which, if the advertising had not been exchanged, it would have been sold for cash in a similar transaction.
UITF Abstract 27	<i>Revision to estimates of the useful economic life of goodwill and intangible assets</i>	The abstract deals with where estimates of the useful economic lives of goodwill or intangible assets are revised, the carrying value should be amortised over the revised remaining useful economic life ie, accounted for prospectively. This would also apply where the presumption of a 20-year life has previously been rebutted. This may have an impact on environmentally related intangible assets (eg, development costs as accounted for under SSAP 13).
UITF Abstract 28	<i>Operating lease incentives</i>	The abstract requires all incentives for the agreement of a new or renewed operating lease to be as an integral part of the net payment agreed for the use of the asset, irrespective of the nature, form or timing of the payments. The abstract supports the aims of SSAP 21 in giving the user of accounts a better understanding of the true value and ownership of the asset.
UITF Abstract 29	<i>Website development costs</i>	In as much as websites are used for environmental messages and as a path towards reduction in consumption of some resources this has some relevance. Website planning costs should be charged to the profit and loss account as they are incurred. Subject to certain conditions, website development costs can be capitalised as tangible fixed assets. Costs relating to ongoing maintenance and operation of a website should be expensed as incurred.
UITF Abstract 31	<i>Exchanges of businesses or other non-monetary assets for an interest in a subsidiary, joint venture or associate</i>	This abstract deals with the accounting in consolidated financial statements for exchanges of a business or other non-monetary assets for an interest in another entity (ie, non-cash transfers). This is unlikely to be of environmental impact.
UITF Abstract 32	<i>Employee benefit trusts and other intermediate payment arrangements</i>	In a typical employee benefit trust, an entity makes payments to a trust, the beneficiaries of which are to be the entity's employees, and the trust then uses assets accumulated from those payments to pay the entity's employees for some or all of the employee services they have rendered to the entity. The abstract deals with whether the sponsoring entity's payments to the intermediary represent an immediate expense of the entity, and if the payments do not represent an immediate expense, what is the nature and extent of the sponsoring entity's assets and liabilities after making the payment to the intermediary. There is unlikely to be any environmental impact as a result of this abstract.
UITF Abstract 34	<i>Pre-contract costs</i>	This abstract addresses the accounting by the supplier for the costs of tendering for and securing contracts (ie, pre-contract costs). The UITF took the view that costs should be expensed as incurred except for directly attributable costs which should be recognised as an asset when it is virtually certain that a contract will be obtained and the contract is expected to result in future net cash inflows (ie, future revenues less attributable costs) with a present value no less than all amounts recognised as an asset. An example here would be the tendering costs for an excavation project.
UITF Abstract 35	<i>Death-in-service and incapacity benefits</i>	An issue arose on the interpretation in FRS 17 of how an entity should recognise the cost of providing death-in-service and incapacity benefits where the benefits are provided through a defined benefit pension scheme. This abstract is unlikely to be of environmental impact.
UITF Abstract 36	<i>Contracts for sales of capacity</i>	For sales of generating capacity there is clear significance for an industry with significant environmental impacts. The specific conditions of the abstract enable the user to be clear whether the underlying asset whose capacity has been sold is under the ownership and control of the buyer or seller and the financial implications of that ownership are fully reflected.
UITF Abstract 38	<i>Accounting for ESOP trusts</i>	The UITF reached a consensus that the sponsoring company of an ESOP trust should recognise the assets and liabilities of the trust in its own accounts whenever it has de facto control of those assets and liabilities. This will generally be the case when the trust is established in order to hold shares for an employee remuneration scheme and may be so in other circumstances. This abstract has little environmental impact.

## Extant Urgent Issues Task Force Abstracts (continued)

UITF Number	Title	Environmental implications and examples
UITF Abstract 39	<i>Members' shares in co-operative entities and similar instruments</i>	This interpretation applies to financial instruments within the scope of FRS 25 including financial instruments issued to members of co-operatives entities that evidence the members' ownership interest in the entity. The interpretation sets out conditions as to when this is deemed to be a financial liability rather than equity. This interpretation is unlikely to have an environmental impact.
UITF Abstract 40	<i>Revenue recognition and service contracts</i>	Many environmental services are provided in this way and the abstract tries to set out when the service provider can recognise revenue from the contracts. For contracts clearly setting out a particular objective associated with a single event, for example the achievement of an ISO standard, the abstract would suggest that the service provider would not recognise the income until the event had occurred. Alternatively, if the seller's contractual obligations are performed gradually over time, revenue should be recognised as contract activity progresses to reflect the seller's partial performance of its contractual obligations.
UITF Abstract 41	<i>Scope of FRS 20 (IFRS 2)</i>	The abstract gives an example of an organisation that gives shares to a section of the community to enhance its reputation as a good corporate citizen without receiving any specific consideration. It would be possible that an organisation acts in this way towards a local community in order to increase its chances of getting permission for local activities such as a landfill site or power station construction. The value put on the enhanced reputation is taken to be the fair value of the shares or rights given.
UITF Abstract 42 (IFRIC 9)	<i>Reassessment of embedded derivatives</i>	Together with FRS 26 this makes it clear that an assessment should be made of whether, for example, emissions trading should be separated out of the host contract and that once declared a separate derivative element this should not be reviewed unless there is a significant change to the contract.
UITF Abstract 43	<i>The interpretation of equivalence for the purposes of section 228A of the Companies Act 1985</i>	With effect for accounting periods commencing on or after 1 January 2005, the Companies Act 1985 has been amended to include section 228A. This exempts, subject to certain conditions, an intermediate parent undertaking from the requirement to prepare consolidated accounts where its parent entity is not established under the law of an EEA state. The exemption complements the exemption in section 228 for intermediate parent undertakings where the parent entity is established under the law of an EEA state. There is little environmental impact as a result of this abstract.
UITF Abstract 44	<i>FRS 20 – Group and Treasury share transactions</i>	UITF Abstract 44 addresses the issues of certain transactions and whether they should be cash settled or equity settled. It also applies to share-based payment arrangements involving two entities in the same group. This abstract is unlikely to have an environmental impact.
UITF Abstract 45 (IFRIC 6)	<i>Liabilities arising from participating in a specific market – Waste Electrical and Electronic Equipment (WEEE)</i>	The abstract sets out guidance on accounting for obligations arising out of the Waste Electrical and Electronic Equipment (the WEEE directive). This directive makes producers liable for financing certain waste management costs. The WEEE directive requires any manufacturer who participates (ie, sells product and has a market share) to finance a proportion (determined based on market share) of the costs of waste management. As a result, the accounting guidance requires provisions be established based on participation in the relevant market in a period rather than when the waste management costs are incurred or when the related product which is being disposed of was manufactured. The WEEE directive can result in companies which enter a new market for the first time having to fund obligations for disposal of waste manufactured several years previously. The precise obligation depends on individual governments decisions on calculation of market share.
UITF Abstract 46	<i>Hedges of a net investment in a foreign operation</i>	UITF Abstract 46 applies to entities that hedge the foreign currency risk arising from it net investments in foreign operations and wishes to qualify for hedge accounting in accordance with FRS 26. This abstract is unlikely to have an environmental impact.

## International Accounting Standards

IAS Number	Title	Environmental implications and examples
IAS 11	<i>Construction contracts</i>	This standard applies to construction contracts and contracts for services directly related to the construction of an asset. Provisions for long-term contract accounting would have to be followed as per this standard. The standard focuses on the 'percentage of completion method' if the outcome of the contract can be estimated reliably.
IAS 12	<i>Income taxes</i>	This standard focuses on the tax treatment of any costs incurred by the business. The timing and type of the transactions will have an impact on the taxable treatment (either current or deferred tax impact). Research costs would be recognised as an expense in the accounting period, but may not be permitted as a deduction in determining the taxable profit (or loss). The timing of development costs (in relation to an environmental asset) would also have an impact on the taxable base of an asset.
IAS 16	<i>Property, plant and equipment</i>	Land, plant and machinery and vehicles are significant environmentally sensitive fixed assets in that they contribute to the 'environmental impairment' of natural assets. IAS 16 ensures that assets are properly recorded and consistently and that proper disclosure is made. The value of these assets is shown in the balance sheet and the assets are depreciated over their useful economic life (which is reassessed annually). Fixed assets should initially be measured at cost. If a decision is made to revalue one asset, then all other assets of the same class must be re-valued. Revaluation should take into account the impact of environmental factors and environmental legislation. For example, plant that no longer meets environmental regulations would be valued at the lower of cost and recoverable amount (it's the higher of net realisable value or its value in use). In either case the cost of bringing the plant up to the regulation specification would have an impact on its valuation. Equally the cost of an asset should include the costs associated with the dismantling, removal or restoration (and therefore any future environmental related costs). This standard does not apply to biological assets related to agricultural activities plus other items. Enhancements to any technology that may have an impact on the environment, either adversely or otherwise will need to be considered to understand whether they should be capitalised in accordance with this standard.
IAS 18	<i>Revenue</i>	IAS 18 sets out the basic principles of revenue recognition that should be applied in all situations and gives detailed illustrative examples. This standard is not applicable to revenue related to the extraction of mineral ore, the initial recognition of agricultural produce or the changes in the fair value of biological assets related to agricultural activity.
IAS 19	<i>Employee benefits</i>	IAS 19 sets out the rules regarding measurement and disclosure of retirement benefits and is therefore expected to have a limited impact on the environment. However, assumptions used to measure the assets and liabilities used in calculating the fair value may be impacted by socio-economic environmental factors.
IAS 21	<i>The effect of changes in foreign exchange rates</i>	This standard deals with the recording of transactions transacted in different currencies to that used in the presentational and functional currency of the business. Accordingly, the impact on the environment of this standard is expected to be limited.

## Extant International Financial Reporting Interpretations and Standing Interpretations Committee Reports

IFRIC Number	Title	Environmental implications and examples
IFRIC 6	<i>Liabilities arising from participating in a specific market – Wast Electronic and Electrical Equipment</i>	This interpretation sets out guidance on accounting for obligations arising out of the Waste Electrical and Electronic Equipment (the WEEE directive). This directive makes producers liable for financing certain waste management costs. The WEEE directive requires any manufacturer who participates (ie, sells product and has a market share) to finance a proportion (determined based on market share) of the costs of waste management. As a result, the accounting guidance requires provisions be established based on participation in the relevant market in a period rather than when the waste management costs are incurred or when the related product which is being disposed of was manufactured. The WEEE directive can result in companies which enter a new market for the first time having to fund obligations for disposal of waste manufactured several years previously. The precise obligation depends on individual governments decisions on calculation of market share.

## Appendix 3: Audit process – examples and procedures

This appendix provides examples of questions and procedures relating to environmental issues that an auditor may need to consider as part of an audit of financial statements. The examples are included for illustrative purposes only. It is not envisaged that the questions and procedures will be appropriate in any particular case, nor should the list be regarded as comprehensive.

The process is set out below in five stages although, in practice, an auditor's approach may combine elements from different stages:

- Knowledge of the business
- Assessment of risk
- Understanding processes and internal control systems
- Testing controls
- Substantive testing.

### Knowledge of the business

1. Does the nature of an entity's operations expose it to significant environmental regulations or risks that may affect the financial statements?
2. Which environmental laws and regulations are of particular relevance to the entity?
3. Is the entity's environmental performance subject to external monitoring as part of maintaining its licence to operate?
4. Have enforcement agencies taken any regulatory actions or issued any reports that may have a material impact on the entity and its financial statements?
5. Is there a history of penalties and legal proceedings against the entity or its directors in connection with environmental matters? If so, what were the reasons?
6. Are any legal proceedings pending with regard to compliance with environmental laws and regulations?
7. Do current or anticipated regulatory requirements on issues such as climate change present risks or opportunities that might impact accounting treatment or disclosure in the entity's financial statements?
8. Are environmental risks covered by insurance?
9. Does the entity have any key performance indicators relating to environmental issues that should be disclosed in the business review?
10. How does management select and apply accounting policies for emerging environmental issues, such as emission allowances, end-of-life liabilities?
11. Is the entity's relationship with any major suppliers or customers likely to be affected by environmental issues?
12. What is the entity's strategy in relation to environmental matters? For example, is there a carbon-neutral objective?

The auditor's knowledge of the business is also enhanced by reviewing documentation such as:

1. Minutes from meetings of directors, audit committee or any other committee of the board specifically responsible for environmental matters.
2. Publicly available information regarding any existing or possible future environmental matters.
3. Where relevant, considering:
  - reports by environmental experts, such as site assessments, due diligence investigations or environmental impact studies;
  - internal audit reports and other internal reports dealing with environmental matters;
  - reports issued by, and correspondence with, regulatory and enforcement agencies;
  - publicly available registers or plans for the restoration of soil contamination.

## Assessment of risk

1. What is the entity's procedure for identifying, measuring and managing environmental risk?
2. Has the entity taken or planned any action to manage the environmental risks identified?
3. Has the entity made a reasonably reliable estimate of the financial effects of the environmental risks?
4. What risks have been identified from the auditor's risk assessment procedure and what financial statement assertions are affected?

## Understanding processes and internal control systems

1. What is management's attitude and operating style with regard to environmental control in general?
2. Does the entity's operating structure include assigning responsibility for environmental control, including board level responsibility, to specified individuals?
3. Does the entity have a procedure to monitor compliance with environmental laws and regulations and to assess the impact of possible changes in environmental legislation likely to affect the entity?
4. Are procedures in place to identify, assess and reduce environmental risk and to monitor any mitigating actions and controls?
5. Does the entity operate an environmental information system, an environmental management system or any other system that captures environmental data (including data on greenhouse gas emissions)?
6. What reliance can be placed on the identified policies and procedures to minimise risks that may have a material impact on the financial statements?
7. If the entity is participating in an emissions trading scheme, or planning to do so, are management systems in place to identify, measure and control the associated risks?
8. Is management aware of the existence and potential impact on the financial statements of any risk of liabilities arising as a result of pollution of soil, groundwater, surface water or air?
9. Does the entity operate control procedures for handling and disposal of waste, including hazardous waste, in compliance with legal requirements?
10. Is there adequate communication between finance personnel and operational management who are responsible for identifying and maintaining environmental risks?

## Testing controls

Based on the auditor's assessment of risk, the principal areas in which an audit may involve testing the operating effectiveness of internal controls include:

1. Identification of applicable laws environmental laws and regulations and compliance monitoring.
2. Internal recording of actual or pending legal proceedings and fines and penalties for non-compliance.
3. Internal reporting and management of environmental issues.
4. Operation of an environmental management system or environmental information system.
5. Development, review and approval of accounting estimates included in the financial statements.
6. Management system for monitoring emissions and emissions trading.
7. System for controlling resource use, energy and waste.
8. Identification and use of key performance indicators.

## Substantive testing

In each case the auditor obtains sufficient appropriate audit evidence to support the tests carried out. The procedures selected will depend on the auditor's assessment of risk and internal control.

## General

1. Review correspondence with relevant external parties, including the entity's lawyers and environmental regulatory bodies.
2. Where there is a likelihood of significant errors relating to environmental liabilities, obtain written representations from management that it has considered the effects of environmental matters on the financial statements, and that it:
  - is not aware of any material liabilities or contingencies arising from environmental matters, including those resulting from illegal or possibly illegal acts;
  - is not aware of environmental matters that may result in a material impairment of assets; or
  - if aware of such matters, has disclosed to the auditor all related facts.
3. When an external expert is used, document the procedures which need to be performed in line with ISA 620.

## Assets

4. Enquire about any planned changes in capital assets, for example, in response to changes in environmental legislation or changes in business strategy and their impact on the valuation of those assets or the entity as a whole.
5. Where fair value measurements or adjustments are included, test the assumptions and valuation models on which these are made.
6. For any asset impairments related to environmental matters that existed in previous periods, consider whether the assumptions underlying a write-down of related carrying values continue to be appropriate.
7. Enquire about the entity's involvement in regulatory schemes that seek to limit or reduce the emission of greenhouse gases. Consider whether any excess of emission allowances over actual emissions are accounted for as intangible assets in accordance with GAAP and the accounting policy is correctly stated.

## Liabilities, provisions and contingencies

8. Enquire about policies and procedures operated to identify liabilities, provisions and contingencies arising from environmental matters.
9. Enquire about events or conditions that may give rise to liabilities, provisions or contingencies arising from environmental matters, for example:
  - penalties or possible penalties arising from breaches of environmental laws and regulations; or
  - claims or possible claims for environmental damage.
10. Enquire about the entity's involvement in regulatory schemes that seek to limit or reduce the emission of greenhouse gases. Consider whether the liability for actual emissions in excess of emission allowances is properly accounted for in accordance with GAAP and the accounting policy is correctly stated.
11. For property abandoned, purchased, or closed during the period, enquire about any site remediation requirements or proposals.
12. For property sold during the period, enquire about any liabilities relating to environmental matters retained by contract or by law.
13. Consider whether the assumptions underlying estimated liabilities, provisions or contingencies relating to environmental matters are appropriate.

## Disclosure

14. Review the adequacy of any disclosure of the effects of environmental matters on the financial statements.
15. Review the consistency of environmental disclosures in the financial statements with other information in documents containing audited financial statements, such as information in the directors' report, the business review or an operating and financial review.

## Appendix 4: Laws and standards relevant to environmental issues

### Legislation and regulation

#### UK

Climate Change Act 2008

The Companies Act 2006

The Environment Act 1995

Pollution Prevention and Control Act 1999

Waste and Emissions Trading Act 2003

#### EU

Accounts Modernisation Directive 2003/51/EC

Air Quality Framework Directive 96/62/EC

Drinking Water Directive 98/83/EC

Eco-Management and Audit Scheme Council Regulation 761/01

End-of-Life Vehicles Directive 2000/53/EC

Environmental Assessment of Plans and Programmes Regulations (2005)

Environmental Impact Assessment Directive 85/337/EEC subsequently amended by 97/11/EC

Environmental Liability Directive 2004/35/EC

Habitats Directive 92/43/EEC

Integrated Pollution Prevention and Control Directive 96/61/EC

Landfill Directive 1999/31/EC

Large Combustion Plant Directive 2001/80/EC

Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation EC/2006/1907

Restriction of Hazardous Substances Directive 2002/95/EC

Strategic Environmental Assessment Directive 2001/42/EC

Transparency Directive 2004/109/EC

Waste Electrical and Electronic Equipment Directive 2002/95/EC

Water Framework Directive 2000/60/EC

## **Standards**

ES 2 (Revised) *Financial, business, employment and personal relationships*

FRS 3 *Reporting financial performance*

FRS 5 *Reporting the substance of transactions*

FRS 7 *Fair values in acquisition accounting*

FRS 11 *Impairment of fixed assets and goodwill*

FRS 12 *Provisions, contingent liabilities and contingent assets*

FRS 18 *Accounting policies*

IAS 1 *Presentation of financial statements*

IAS 8 *Accounting policies, changes in accounting estimates and errors*

IAS 36 *Impairment of assets*

IAS 37 *Provisions, contingent liabilities and contingent assets*

IAS 38 *Intangible assets*

IAS 41 *Agriculture*

IFRIC 1 *Changes in existing decommissioning, restoration and similar liabilities*

IFRIC 3 *Emission rights*

IFRIC 6 *Liabilities arising from participating in a specific market – waste electrical and electronic equipment*

IFRS 3 *Business combinations*

ISA (UK and Ireland) 210 *Terms of audit engagement*

ISA (UK and Ireland) 250 *The auditor's responsibilities relating to laws and regulations in an audit of financial statements*

ISA (UK and Ireland) 300 *Planning an audit of financial statements*

ISA (UK and Ireland) 315 *Obtaining an understanding of the entity and its environment and assessing the risks of material misstatement*

ISA (UK and Ireland) 320 *Audit materiality*

ISA (UK and Ireland) 330 *The auditor's procedures in response to assessed risks*

ISA (UK and Ireland) 500 *Audit evidence*

ISA (UK and Ireland) 501 *Audit evidence – additional considerations for specific items*

ISA (UK and Ireland) 520 *Analytical procedures*

ISA (UK and Ireland) 540 *Auditing accounting estimates, including fair value accounting estimates, and related disclosures*

ISA (UK and Ireland) 545 *Auditing fair value measurements and disclosures*

ISA (UK and Ireland) 560 *Subsequent events*

ISA (UK and Ireland) 570 *Going concern*

ISA (UK and Ireland) 580 *Management representations*

ISA (UK and Ireland) 620 *Using the work of an expert*

ISAE 3000 *Assurance engagements other than audits or reviews of historical financial information*

UITF 27 *Revision to estimates of the useful life of goodwill and intangible assets*

UITF 45 *Liabilities arising from participating in a specific market – waste electrical and electronic equipment*

## **International Organization for Standardization**

ISO 14000 *International organization for standardization*

ISO 14001 *Environmental management systems – Requirements with guidance for use*

\*ISO 14010 *Guidelines for environmental auditing – General principles*

\*ISO 14011 *Guidelines for environmental auditing – Audit procedures – Auditing of environmental management systems*

\*ISO 14012 *Guidelines for environmental auditing – Qualification criteria for environmental auditors*

## Appendix 5: Abbreviations

ABI	Association of British Insurers
AccountAbility	Institute of Social and Ethical Accountability
AMD	Accounts Modernisation Directive
ASB	Accounting Standards Board
CRC	Carbon Reduction Commitment
EMAS	Environmental management accounting
EMAS	EU Eco-Management and Auditing Scheme
EMS	Environmental management system
ESG	Environmental social and governance
EUA	EU allowance
IAASB	International Audit and Assurance Standards Board
ICAEW	The Institute of Chartered Accountants in England and Wales
IFAC	International Federation of Accountants
IFRS	International Financial Reporting Standard(s)
IPPC	Integrated Pollution Prevention and Control
ISO	International Organization for Standardization
MFCA	Material flow cost accounting
OECD	Organisation for Economic Cooperation and Development
OFR	Operating and Financial Review
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
ROCs	Renewable Obligation Certificate
RoHS	Restriction of Hazardous Substances
SRI	Socially responsible investment
WEEE	Waste Electrical and Electrical Equipment

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## Role of the ICAEW

The ICAEW is an independent professional body which is obliged by its Royal Charter to act in the public interest. In its work on sustainability, the ICAEW can draw on the experience and knowledge of active members drawn from a broad and diverse international membership of over 132,000. The ICAEW's commitment to leading and shaping debate on sustainability is demonstrated by the stature and experience of its Corporate Responsibility Advisory Group.

In delivering this *Sustainable Business* programme, the ICAEW will also be able to draw on other sources of expertise and thought leadership, for example in corporate governance, financial management, ethics, financial reporting, audit and assurance, and financial services. Our ability to act as a bridge between the academic community and practitioners (ie, non-academics) is a particular feature of our thought leadership work. We are also well qualified to stimulate debate on information quality as it relates to sustainability. This programme will question the assumptions that underpin conventional sustainability reporting and assurance and be objective about its value while trying to develop better information to assess and enhance the contribution business is making to a sustainable world.

## Role of the Environment Agency

The Environment Agency is the leading public body for protecting and improving the environment in England and Wales. It's our job to make sure that air, land and water are looked after by everyone in today's society, so that tomorrow's generations inherit a cleaner, healthier world. Our vision is to create a better place for all.

We think that businesses should value the benefits they receive from a rich and diverse natural environment and should contribute to getting positive results for the environment. By doing so, they can benefit in terms of their competitiveness and value to their shareholders and secure trust from the wider community.

An increasing number of companies are finding that it pays to be green. New technologies offer new opportunities to solve environmental problems. But many businesses still have a significant effect on the environment – and some simply don't follow the law and so regulation is still needed. We will focus our efforts on the greatest threats to the environment.



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