







Environmental Management Systems


The standards to meet



EMS Standards

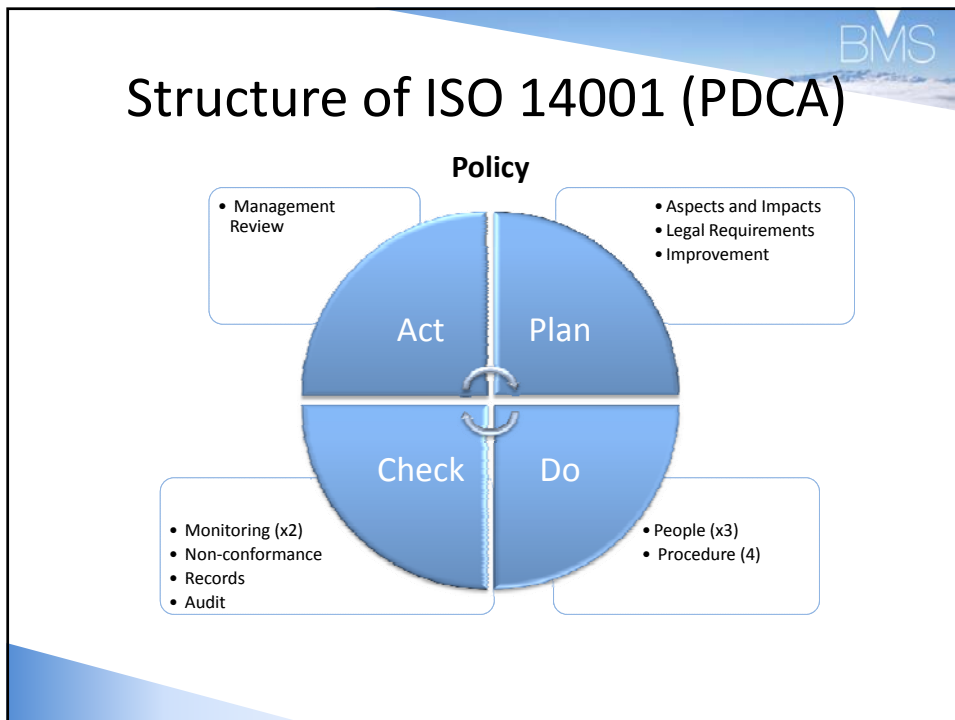
- ▶ ISO 14001
 - First version 1994
 - Second version 2004
- ▶ EMAS
 - First version EMAS I: 1993
 - Second version EMAS II: 2001
- ▶ BS 8555:2003
 - Also known as 'Acorn'

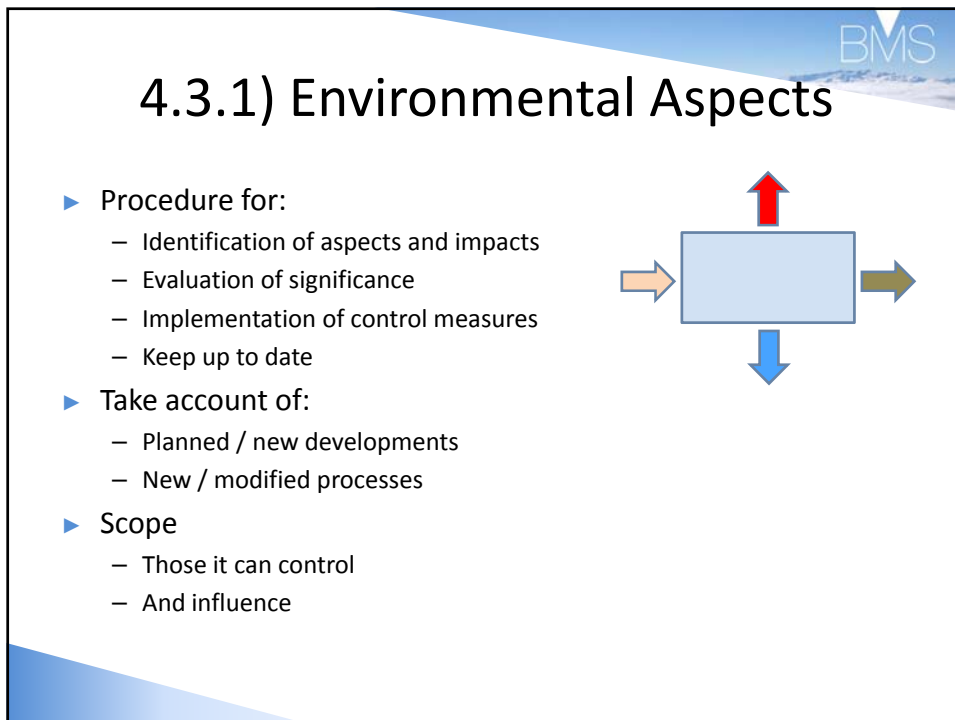
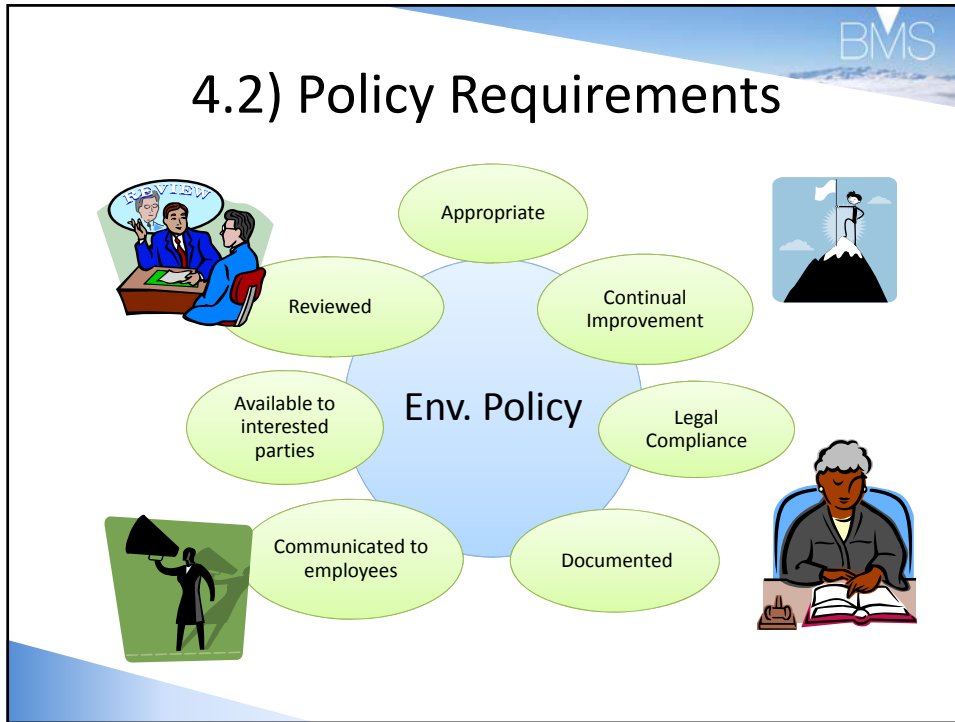




Pros and Cons of EMS Standards



<p>Pros</p> <ul style="list-style-type: none"> ▶ Customers / clients know that the organisation meets a minimum standard without having to do individual audits ▶ 3rd part certification is a good discipline and increases transparency ▶ Same standard around the organisation / world ▶ Based on best practice ▶ Drives continual improvement 	<p>Cons</p> <ul style="list-style-type: none"> ▶ Clients often still undertake 2nd party audits ▶ Quality of certification audits may vary ▶ EMAS and BS 8555 are not international ▶ Best practice may have moved on since standard developed ▶ Do not guarantee legal compliance ▶ Not product standards
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4.3.2) Legal and other requirements

- ▶ Procedure for:
 - Identification of legal requirements
 - Accessing legal requirements
- ▶ Keep up to date
- ▶ Communicate relevant information to employees



4.3.3 Objectives, targets and programme(s)

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graph TD; Policy[Policy 4.2] --> Objectives[Objectives 4.3.3]; Objectives --> Targets[Targets 4.3.3]; Targets --> Programmes[Management programmes 4.3.3]; Business[Business] --> Targets; Operational[Operational] --> Targets; Finance[Finance] --> Targets; Technology[Technology] --> Targets; Significant Aspect[Significant Aspect] --> Targets; Legal requirements[Legal requirements] --> Targets;
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Policy (4.2)

Objectives (4.3.3)
• Overall environmental goal, consistent with policy

Targets (4.3.3)
• Detailed performance requirement, applicable to the organisation (or part), that arises from the env. objectives and that needs to be set in order to achieve those objectives.

Management programmes (4.3.3)
Responsibility, Means, Timeframe

Legal requirements

Significant Aspect

Technology

Finance

Operational

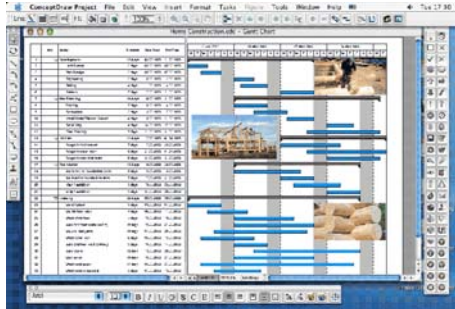
Business

BMS

4.3.3 Objectives, targets and programme(s) cont.

Management Programme:

- Achieve objectives
- Responsibilities
- Authority
- Means (resources)
- Time frame
- Be reviewed
- Be amended



BMS

4.4.1) Resources, roles, responsibility and authority

Define
Document
Communicate

↓

- Roles
- Responsibilities
- Authorities


Ultimate Responsibility

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graph TD
    TopMgt[Top Mgt.] --> a[a]
    TopMgt --> b[b]
    TopMgt --> c[c]
    TopMgt --> EMR[EMR]
    EMR --> a
    EMR --> b
    EMR --> c
            
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- Report to top management on performance
- Ensure the EMS is established, implemented and maintained

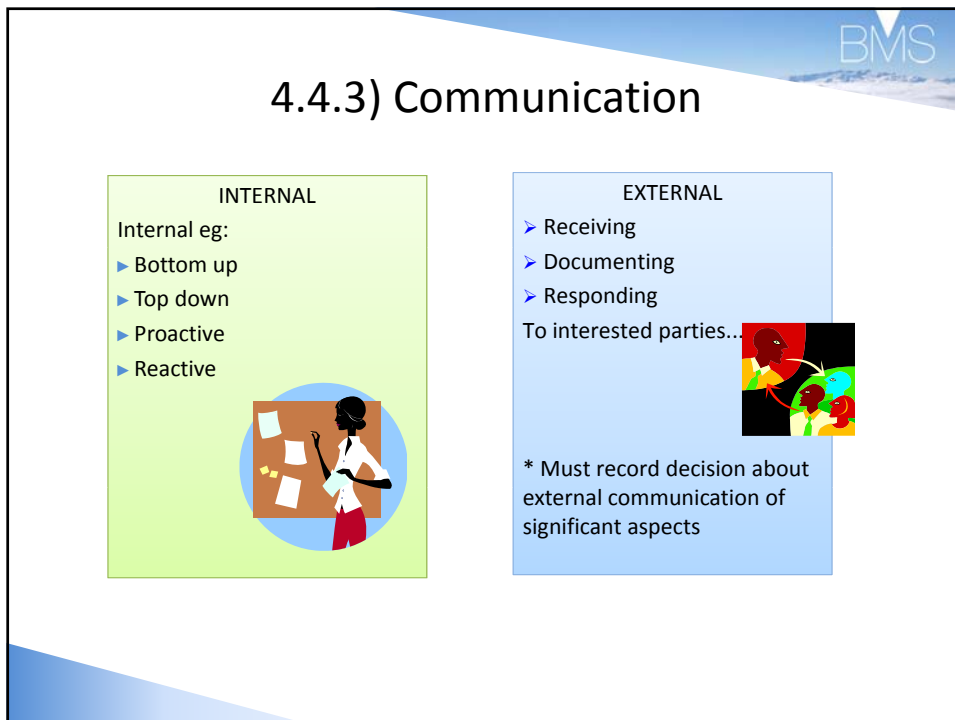
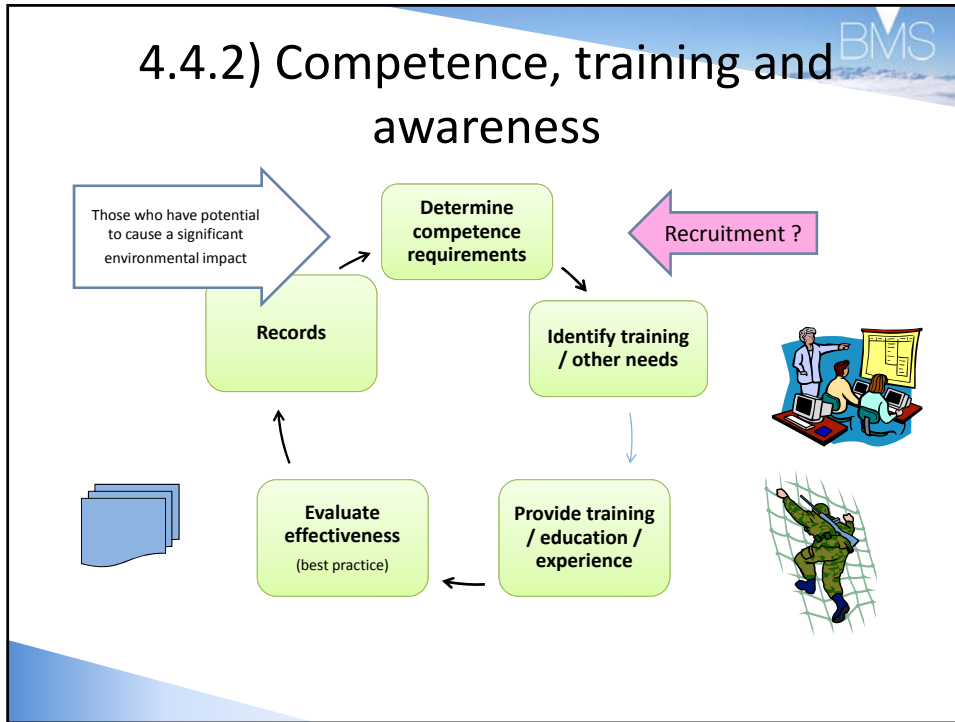
Provide Resources

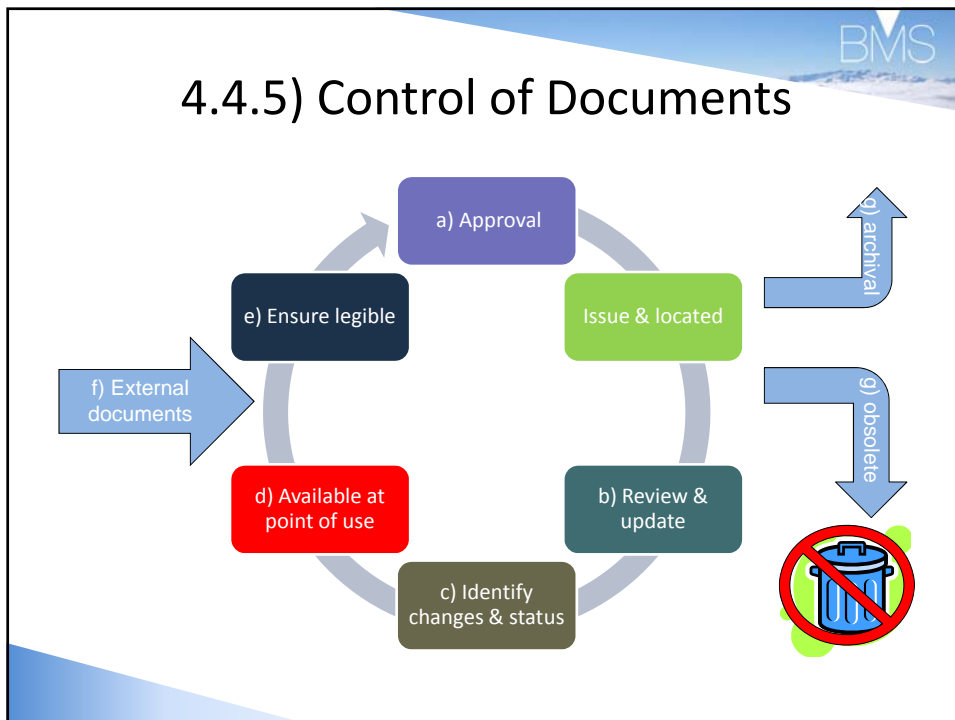
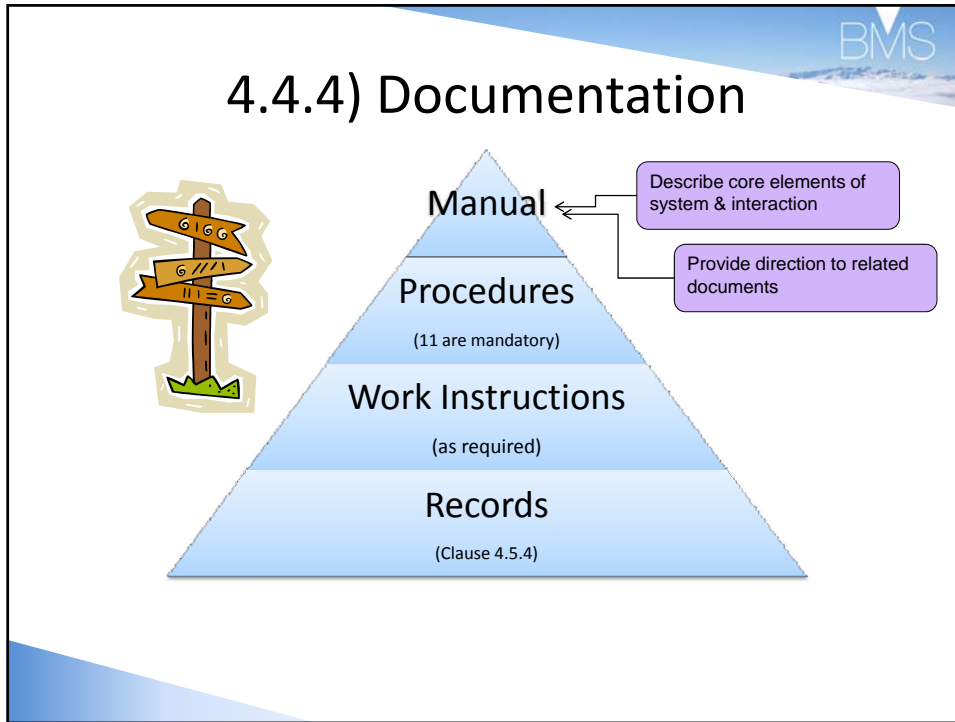


Implement EMS

Maintain

Improve





4.4.6) Operational control

- ▶ To control significant environmental aspects
- ▶ Many include:
 - Waste
 - Air
 - Water
 - Land
 - Noise and Dust
 - Plants and Animals
 - Oil Storage
- ▶ Purchasing
- ▶ Control of Contractors



4.4.7) Emergency preparedness and response



- ▶ Identify potential for...
- ▶ Respond to...
- ▶ Preventing...
- ▶ Mitigating...
- ▶ Review (after incident)
- ▶ Test (where practicable)



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4.5.1) Monitoring & Measurement


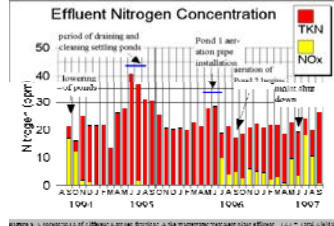
- ▶ Procedure for
 - Key characteristics
 - Applicable operational controls
 - Objectives and targets
 - Calibration & maintenance of monitoring equipment, retain records

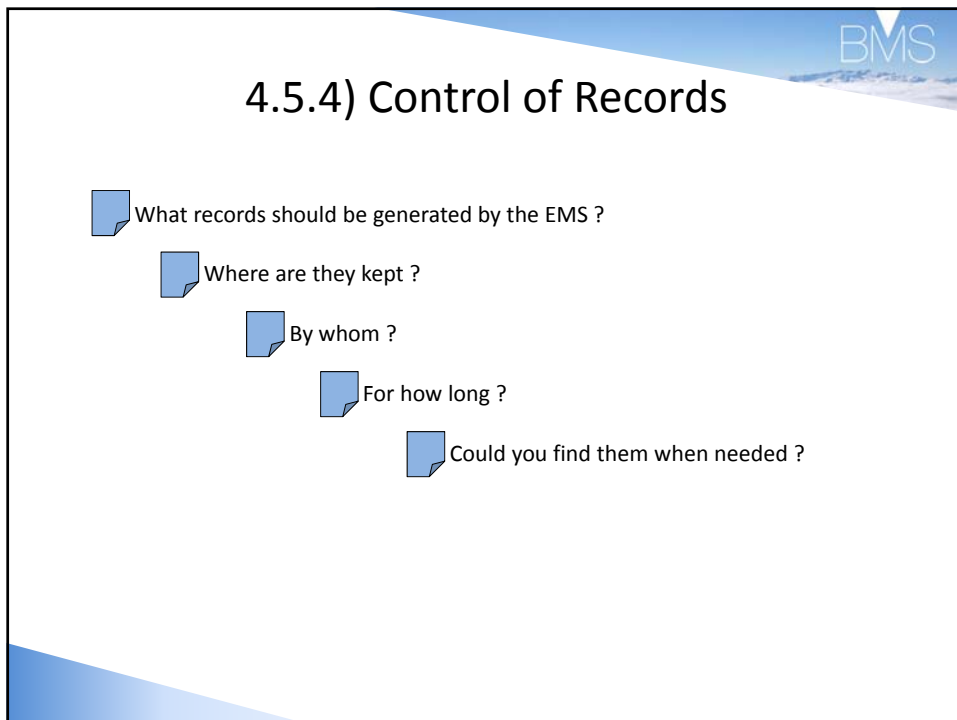
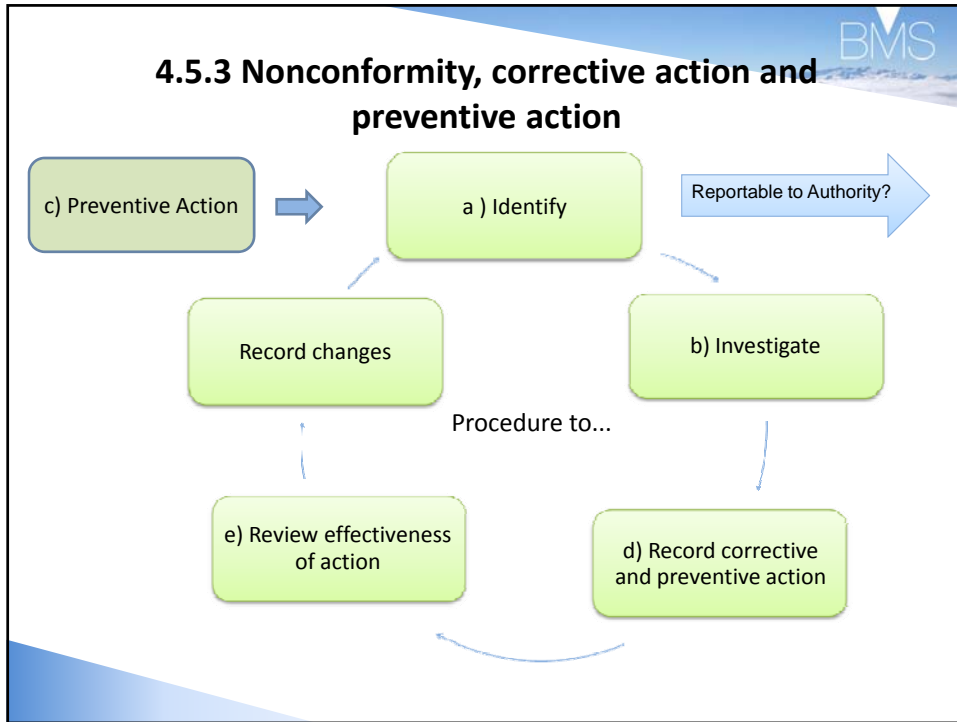



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4.5.2 Evaluation of Compliance

- ▶ Periodically evaluate compliance with legislation may include:
 - Sampling at discharge points
 - Checking for dark smoke
 - Waste inspections
 - Checking transfer notes
 - Checking licensed carriers
 - Monitoring packaging levels
 - Monitoring energy consumption



BMS

4.5.5) Internal Audit

- ▶ At planning intervals
- ▶ To determine if the EMS:
 - Conforms to planned arrangements
 - Requirements of ISO 14001
 - Is properly implemented and maintained
 - Is effective in meeting aim of policy
- ▶ The audit programmes
 - Environmental importance
 - Previous audits
- ▶ Selection of auditors
- ▶ Documented Procedure
- ▶ Follow-up activities

