

Demystifying new concepts, terminology and requirements as per clauses 4, 6, 8 and 9 of the DIS version of the third revision of the ISO 14001 environmental management system standard (Part 4 of a 5-part series)

The flagship management system standard of the International Organisation for Standardisation, the environmental management system (EMS) standard (ISO 14001) is currently being reviewed and revised. This standard was first published in 1996. Working Group 5 of the Technical Committee 207 succeeded in issuing a DIS (draft international standard) for final comments and voting at the close of proceedings of the eighth meeting held in Panama City, Panama, in May 2014. Member countries now have an opportunity to vote for and scrutinise the DIS version and to submit final comments before a final version of the standard is issued in 2015.

As explained in the three preceding articles, end-users can expect a third revision of the standard that is significantly different from the second revision. These changes were brought about by the HLS for management system standards to address the future challenges for environmental management system standards.

The first objective of this article is to explore the new concepts, terminology and also some of the new requirements that are associated with clauses 4, 6, 8 and 9 of the DIS version of the third revision of the ISO 14001 standard. The second objective is to explain at a macro-level the relationships between Clause 4, which provides for a strategic view of the organisation, and Clause 6, which requires \ detailed discovery process with a high-level

plan to manage the output of clause 6. Clause 8 calls for action, while Clause 9 provides for checking processes. The fourth objective is offer a schematic view of the detailed requirements per clause.

1 New concepts and terminology

New concepts and terms that are introduced in Clauses 4, 6, 8 and 9 of the third revision are listed in Table 1. Understanding these terms is an important prerequisite to correctly interpreting the relevant clauses.

Table 1 New concepts and terminology

New concepts and terms	Intent	Extent of change
Protect the environment	Protection of the environment refers to environmental impacts other than pollution or degradation impacts. This includes amongst others: sustainable resource use, climate change mitigation and adaptation, protection of biodiversity and ecosystems, or other relevant environmental issues.	New term
Determine	Establish or find out or a discovery process that results in knowledge. Replaces identify.	New in annex
Define	State or describe exactly the nature, scope or meaning of what is under consideration.	New in annex
Identify	Establish the identity of something.	New in annex
Notes in the clauses of this standards	Are informative.	Clarification

New concepts and terms	Intent	Extent of change
Notes in the definition section	Are normative.	Clarification
Continual	Indicates a duration that occurs over a period of time, with intervals of interruption. This is the appropriate word to use when referring to improvement.	New in annex
Consider	Necessary to think about. but can be rejected.	New in annex
Take into account	Necessary to think about, but cannot be rejected.	New in annex
Applicable	Means relevant or possible to apply, and implies that if it can be done, it should be done.	New in annex
Ensure	Responsibility can be delegated, but not the accountability to make sure that it is performed.	New in annex
Any	Implies selection and choice.	New in annex
Process Set of interrelated or interacting activities which transforms inputs into outputs.	The term process should replace the previous concept of procedure. This has not been done consistently in the DIS version of the standard.	New term
Documented information	Replaces the nouns documentation and records	New term, old concept

New concepts and terms	Intent	Extent of change
	<ul style="list-style-type: none"> • Retain documented information refers to records. • Maintain documented information refers to documents other than records. <p>Information must be controlled and maintained by an organisation and the medium in which it is contained.</p>	

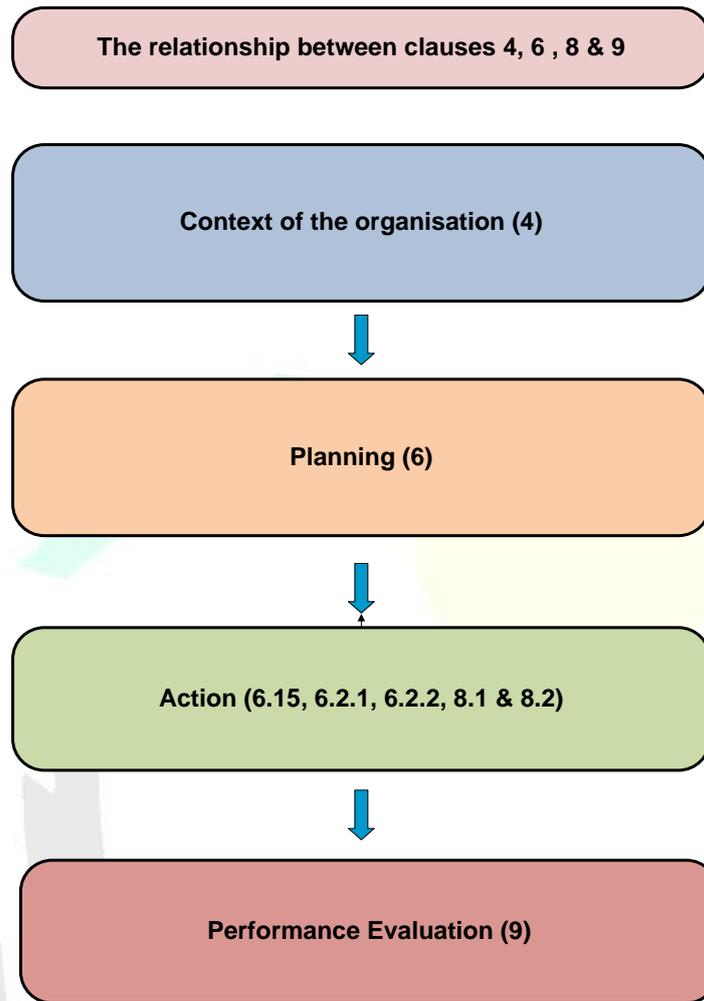
2 Unpacking the key interrelated clauses 4, 6, 8 and 9

It is important to understand at a conceptual level how the key clauses of the third revision of ISO 14001 cascade from a strategic level view of the organisation and its internal and external issues (Clause 4), through the more detailed discovery processes of Clauses 6.1.1 to 6.1.4, to the planning process of clause 6.1.5, which aims to address the outputs of Clause 6 by means of a number of action options. The action options are designed and implemented in terms of Clauses 8.1 and 8.2, culminating penultimately in the evaluation of environmental management performance (Clause 9).

Such a conceptual view of the general intent of the third revision of the standard is imperative to correctly interpreting and understanding the detailed requirements of all the clauses of the standard, as the standard is not written from a work flow perspective.

An overview of the intent of the third revision of the standard is illustrated in Figs 1 to 4.

Fig 1 Key relationships between Clauses 4, 6, 8 and 9



2.1 Clause 4 – Context of the organisation

The intent of Clause 4 is unpacked in Table 2 and Fig 2.

Table 2 Terms and concepts related to Clause 4

Modified concepts and terms	Intent
<p>Organisation: person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives. It includes: a sole-trader, company,</p>	<p>This definition is more inclusive of different types of organisations.</p>

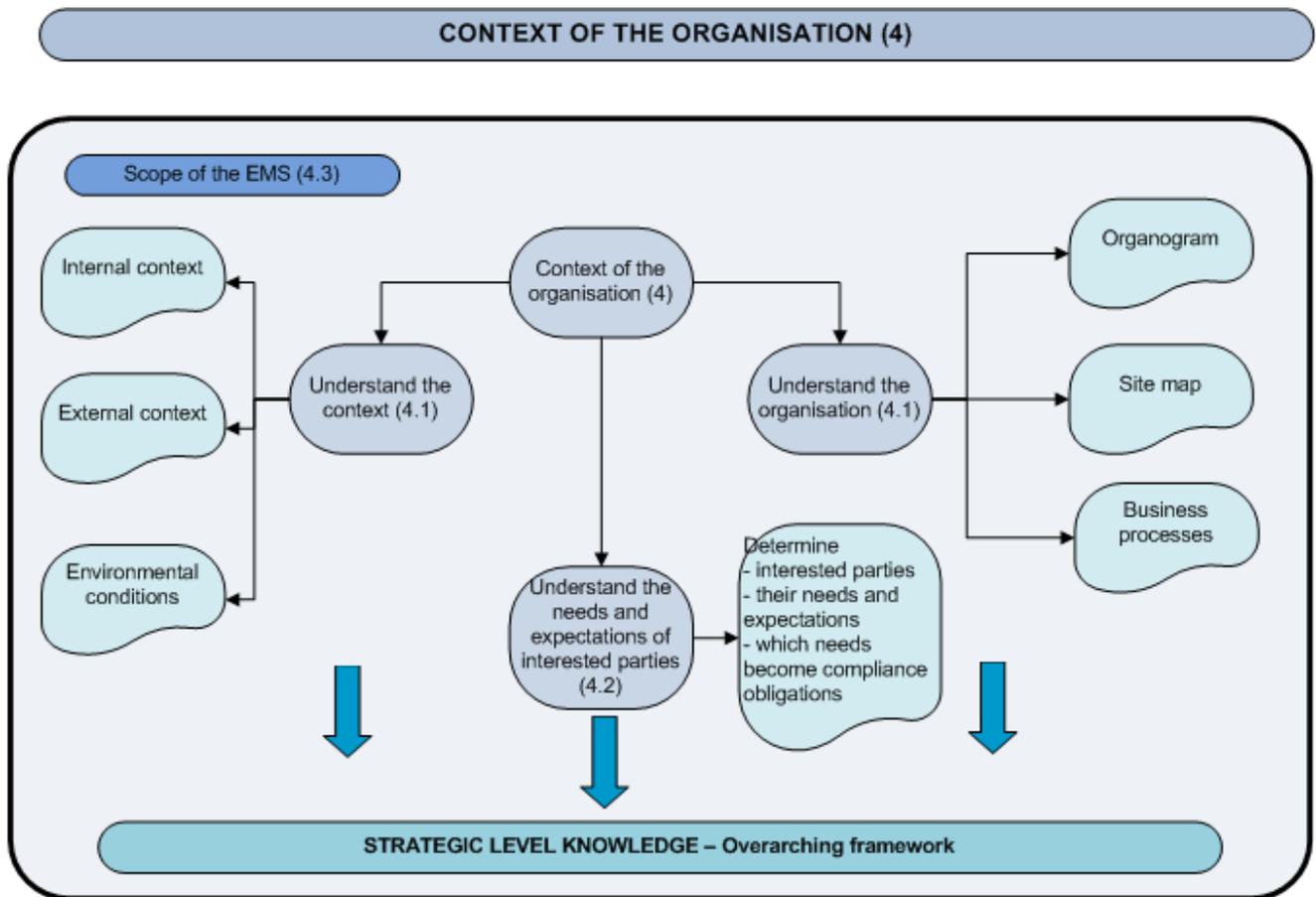
Modified concepts and terms	Intent
corporation, firm, enterprise, authority, charity, or institution etc.	
Interested party: a person or organisation that can affect or be affected by, a decision or activity	<p>See note 2: these perceptions need to be made known to the organisation.</p> <p>Synonymous with stakeholder.</p>
Understand the needs and expectations of interested parties (4.2)	<p>Determine a high-level understanding of</p> <ul style="list-style-type: none"> • the interested parties • their needs and expectations (the expectations need to be made known to the organisation) • which needs and expectations become compliance obligations (the organisation decides which mandatory requirements are to be adopted).
Understand the organisation and its context (4.1)	<p>Determine the internal and external issues</p> <ul style="list-style-type: none"> • that are relevant to the organisation • that may affect the intended outcomes of the EMS • (the environmental conditions) that may affect the organisation.
Organisational context	This is a high-level, conceptual understanding of the issues that may positively or negatively

Modified concepts and terms	Intent
	<p>affect how an organisation manages its environmental responsibilities.</p> <p>The contextual review results in knowledge that is used to guide the organisation to establish, implement, maintain and improve the EMS.</p>
<p>Issues</p>	<p>Issues are important topics for the organisation, problems for debate and discussion, or changing circumstances that affect the organisation's ability to achieve the intended outcomes of the EMS.</p> <p>These issues may include:</p> <ul style="list-style-type: none"> • Environmental conditions • External issues • Internal characteristics or conditions of the organisation <p>These issues may give rise to threats and opportunities related to the organisation or the EMS and need to be managed, reduced or leveraged.</p>
<p>Intended outcomes of the EMS</p>	<p>The intended outcomes of the EMS include:</p> <ul style="list-style-type: none"> • Enhancing environmental performance

Modified concepts and terms	Intent	
	<ul style="list-style-type: none"> • Conforming to compliance obligations • Fulfilling environmental objectives <p>which the organisation wishes to achieve by means of the EMS.</p> <p>These are the minimal core outcomes, and the organisation may set more</p>	
<p>Environmental conditions</p> <p>The state or characteristics of the environment as determined at a specific point of time</p>	<p>These conditions relate to: climate, air quality, water quality, land use, existing contamination, natural resource availability, biodiversity etc. and can either affect the organisation's purpose or be affected by the organisation's characteristics.</p>	
<p>Respond to changing environmental conditions</p>	<p>The response involves identifying environmental conditions that can affect the organisation. These conditions may include: climate, air and water quality, the availability of water, land use, existing contamination, resource availability, biodiversity etc.</p>	<p>New term</p>
<p>Determine the scope of the EMS (4.3)</p>	<p>Clarify the spatial and organisational boundaries of the organisation.</p> <p>The organisation has the freedom and flexibility to define the boundaries.</p> <p>Parts of the organisation can be defined, as long as the top management of that part of the organisation has the authority to</p>	

Modified concepts and terms	Intent
	<p>implement the EMS.</p> <p>Include all the activities, products and services that have significant impacts once the scope is defined.</p> <p>Do not use scoping</p> <ul style="list-style-type: none"> • To exclude activities, products and services that have or can have a significant environmental impact or • To evade compliance obligations. <p>Do not mislead interested parties.</p> <p>The scope is available to the interested parties.</p> <p>Maintain the outcome as documented information.</p>

Fig 2 The nature and extent of Clause 4



2.2 Clause 6 – Discovery processes

The intent of Clause 6 is unpacked in Table 3 and Fig 3

Table 3 Terms and concepts related to Clause 6

The HLS also introduces to the revised EMS standard **new words for familiar concepts**, such as these listed in Table 3.

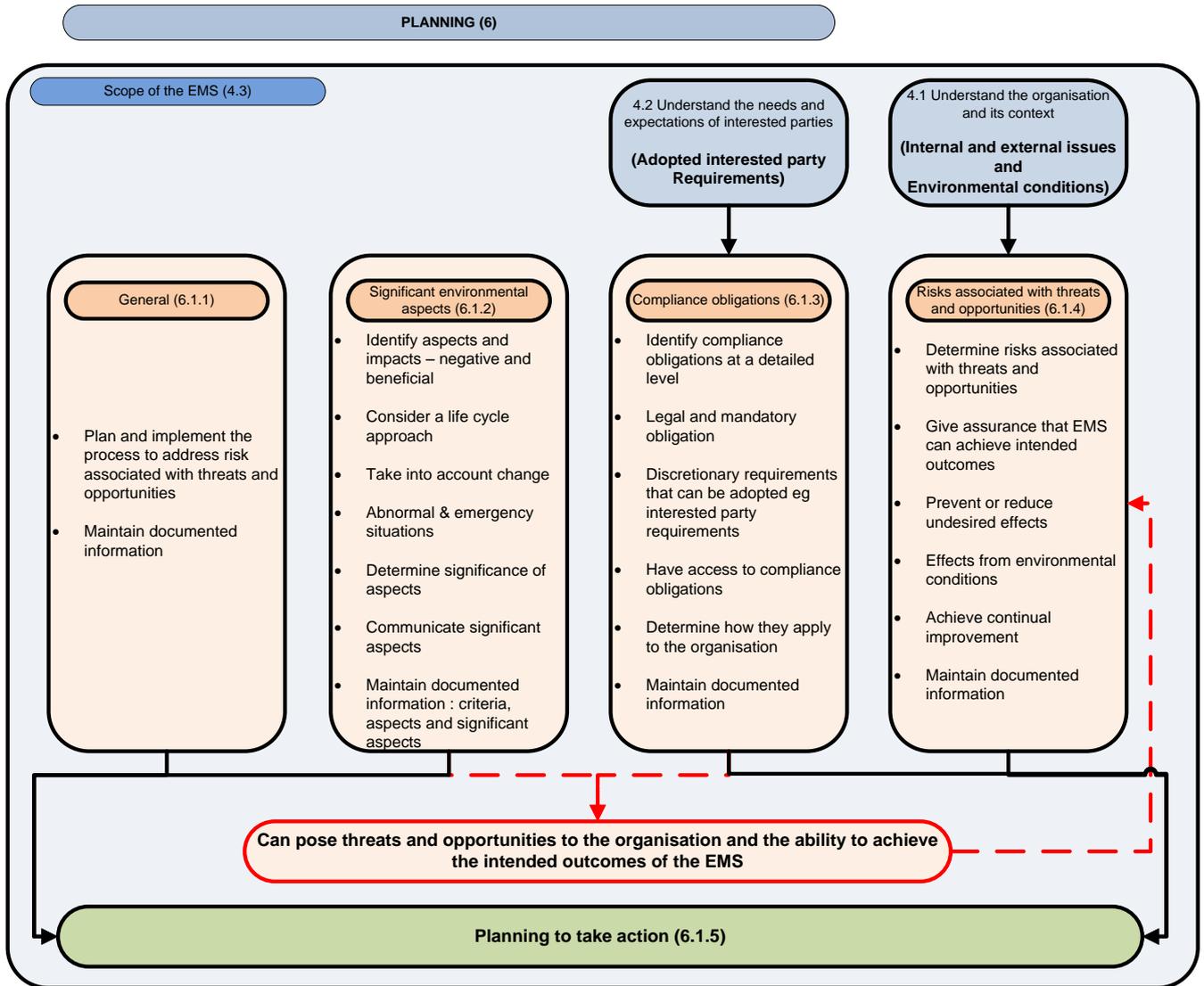
<p>Actions to address risk associated with threats and opportunities (6.1)</p>	<p>Note that the HLS refers to risks and opportunities. The term risk refers to uncertainty only. TC 207 WG 5 corrected this by referring to threats and opportunities.</p> <p>Threats are synonymous with hazards or perils, i.e. they have the</p>
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	<p>potential to harm a receptor.</p> <p>Opportunities are not positive impacts. Unpacking and understanding the uncertainty associated with the threats offer organisations opportunities that can be unlocked or leveraged. The benefits of these opportunities often accrue to the organisation rather than to the threatened receptor.</p> <p>The contextual issues identified in Clause 4.1 are then assessed in terms of clause 4.1.6 at a high or strategic level as risks or opportunities relating to the organisation and its ability to achieve the intended outcomes of the EMS. This includes the effects of environmental conditions on the organisation.</p>
<p>Risk</p> <p>The effect of uncertainty on objectives</p> <p>The effect is a deviation from the expected.</p>	<p>Note: Risk is uncertainty only.</p> <p>Uncertainty pertains to the following:</p> <ul style="list-style-type: none"> • What are the threats/hazards or perils? • What are the opportunities? • What caused the events, incidents or on-going

<p>Uncertainty arises from a deficiency of information.</p> <p>Note that these two terms do not replace impacts and aspects.</p>	<p>conditions?</p> <ul style="list-style-type: none"> • What could happen to the receptors? • What pathways connect the source with the receptor? • What is the likelihood of occurrence? • How bad will it be – what would the severity be? 	
<p>General (6.1.1)</p>	<p>The organisation must plan actions to address the risk (i.e. the uncertainty) associated with threats and opportunities.</p> <p>Consider the issues identified in terms of 4.1 and the requirements in terms of 4.2.</p> <p>Maintain documented information i.e. records.</p>	
<p>Significant environmental aspects (6.1.2)</p>	<p>No changes from the 2014 version</p>	
<p>Environmental aspect</p> <p>An element of an organisation’s activities, products and services that interacts or can interact with the environment</p>	<p>This addition provides for recognising actual and potential impacts.</p>	
<p>Life-cycle</p> <p>Consecutive and interlinked stages</p>	<p>Impacts and aspects need to be identified for activities, products and</p>	<p>New term</p>

<p>of a product system from raw material acquisition or generation from natural resources to end-of-life treatment.</p>	<p>services, considering a life-cycle perspective.</p>	
<p>Compliance obligations</p> <p>Requirements that an organisation has to or may choose to comply with.</p> <p>Mandatory requirements such as applicable laws.</p> <p>Voluntary commitments such as industry standards.</p>	<p>Replaces the terms legal requirements and other requirements.</p> <p>No change in meaning from the previous terms is intended.</p>	

Fig 3 The nature and extent of Clause 6



2.3 Clauses 8 and 9: Action and Performance Evaluation

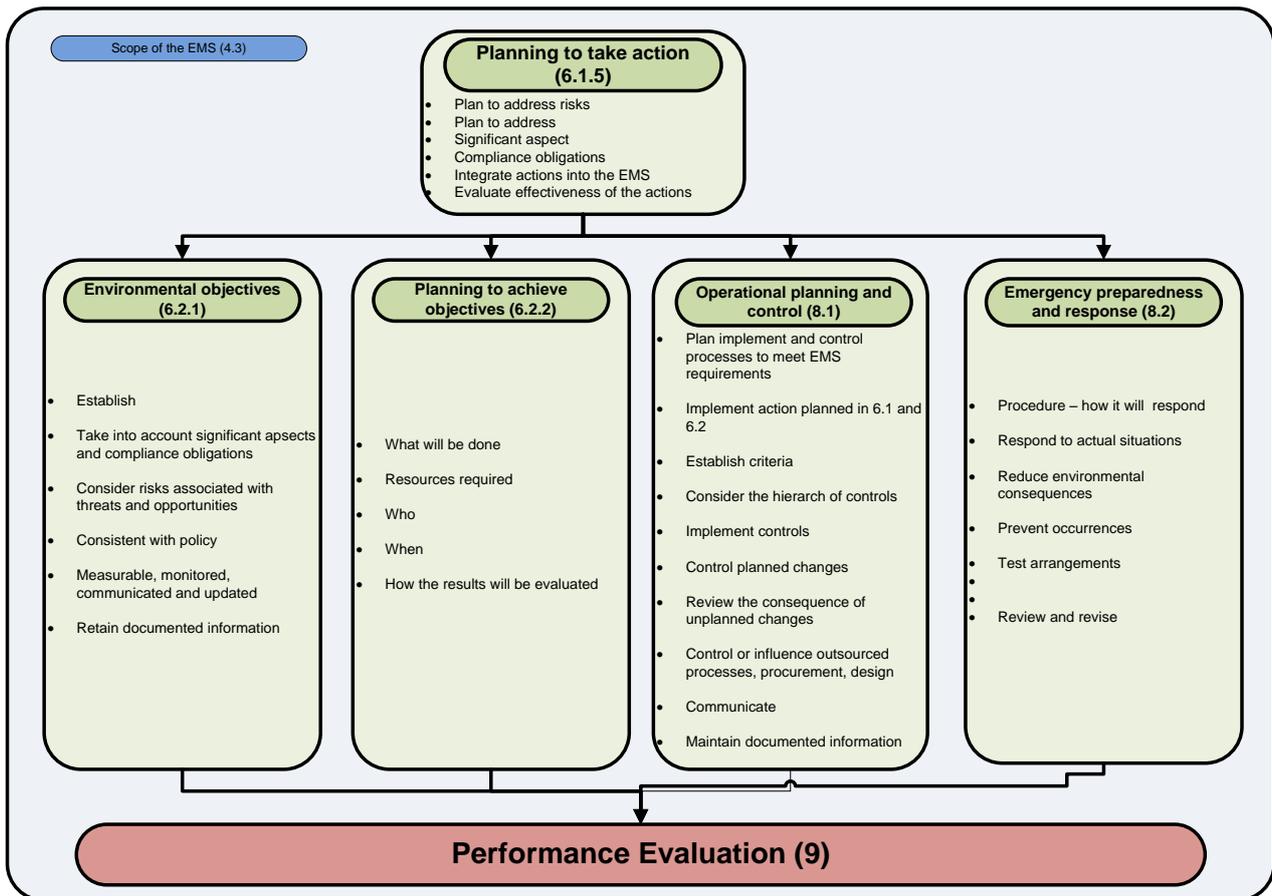
The intent of Clause 8 is unpacked in Table 4 and Fig 4 while only the link to Clause 9 is illustrated.

Table 4 Terms and concepts related to Clauses 8 and 9

Modified concepts and terms	Intent
Design	Working out the form, fit or function of something. Design is explicitly mentioned in clause 8.1a.
Objectives	“Targets” has been dropped but “indicators” has

Modified concepts and terms	Intent
	been added.
<p>Indicator</p> <p>A measurable representation of the condition or status of operations, management or conditions.</p>	<p>As called for in clauses 6.2.2 (objectives) and 9.1.1 (4) (monitoring and measurement.</p>
<p>Measurement</p> <p>The process of determining a value</p>	<p>A value is determined most often through the use of an instrument.</p>
<p>Monitoring</p> <p>Determining the status of a system or a process</p>	<p>The status can be detected by means of an observation.</p>
<p>Outsource</p> <p>Make an arrangement where an external organisation performs part of an organisation’s function or process.</p>	<p>NB: differentiate between “outsource” and “procured processes”.</p> <p>The external organisation is outside the scope of the management system while the outsourced function or process is within scope.</p> <p>The requirements are specified in clause 8.1</p>

Fig 4 The nature and extent of Clause 8 with links to Clause 9



3 Conclusion

The DIS version of the third revision of the ISO 14001 standard for environmental management systems introduces a number of concepts, requirements and terms which are new when compared with those in the 2004 version.

Like the 2004 version, the third revision has not been generated in a logical workflow format. This note is an attempt to offer a conceptual view of the intent of the third revision of the standard, to offer the end-user a context in terms of which the detailed requirements can be interpreted and understood.

Please contact the CEM should you require information or an early-bird awareness presentation of what changes are expected.