Environmental Management Systems Guidelines

2nd edition, September 2009

These guidelines were commissioned by NSW Treasury and prepared by the NSW Government Construction Consultative Committee. These guidelines are a key element of the Procurement Policy Framework of the NSW Government. They are available from the NSW Government Procurement website www.nswprocurement.com.au.

The document shall be updated on an ongoing basis by the Department of Services, Technology and Administration to reflect changes to government policy and procedures. To ensure accurate and up to date information, agencies are advised to access the latest version directly from the website.

Further information on these guidelines should be addressed to:

NSW Procurement Client Support Centre:

Telephone: 1800 NSW BUY (1800 679 289)

Email: nswbuy@services.nsw.gov.au

Issue log

Issue	release date	details
1	Nov 1998	Edition 1.
2	Sept 2009	Alignment with AS/NZS ISO 14001:2004 (Environmental management systems– Requirements with guidance for use). Minor editorial updates.

Contents

Terms used in the *Guidelines*

The terms used include the following and those defined in AS/NZS ISO 14001:2004 and AS/NZS ISO 9000:2000.

The '**accreditation**' of an organisation's Environmental Management System is acceptance by the applicable construction agency that the Environmental Management System is sufficient (possibly because it is certified or has received certification) for the organisation to be considered and used as a service provider to that agency with particular types of contracts.

The term '**agency**' or '**government agency**' means a NSW government department, authority, corporation or other entity established by an Act of the NSW Parliament, excluding state owned corporations not represented on the Construction Consultative Committee. The terms 'government agencies', 'agency' or 'agencies' may be used interchangeably. An agency may act for a client as the customer or be the client for a project.

The term '**audit**' or **'review'** means an examination of a random or particular sample of processes to determine whether or not correct procedures are being followed, and includes a document review or an examination of activities or an examination of documents and activities, to assess their conformity with requirements.

The term '**brief**' means a statement of the end user, functional and operational requirements for the proposed project, and project quality, performance, function and scope objectives. A 'design brief' also covers design requirements.

The '**certification**' of an Environmental Management System is the attestation by certificate that the Environmental Management System meets certain defined requirements for use for a certain scope of activities (usually following an audit by another organisation accredited to provide such certifications, as the certifier).

The term '**client**' means the owner of the asset to be procured or project product, and representative of the end users of the asset.

The term '**construction agency**' or '**government construction agency**' means key government agencies responsible for construction procurement and represented on the Construction Consultative Committee.

The term '**construction**' means all organised activities concerned with demolition, building, landscaping, maintenance, civil engineering, process engineering, heavy engineering and mining.

The term '**consultant**' means a professional person or organisation that contracts with a customer to provide design, management or other services.

The term '**contractor**' means an organisation that contracts with a Principal to carry out the work under the contract, including construction and related services, to deliver an asset or construction product.

The term '**customer**' means an entity calling for tenders and awarding a contract. Each contract involves a customer and a service provider.

The term '**design**' means the process (and product) of converting a brief into design details ready for documentation, including concept design and design development, and then documentation or detailing of the technical and other requirements for the project in a written form that details the project product sufficiently for it to be constructed or otherwise provided.

The term '**environmental opportunity**' means a potential for beneficial environmental impacts.

The term '**environmental risk**' means a potential for adverse environmental impacts.

The term '**management**' means the planning and interactive controlling of human and material resources to achieve time, cost, quality, performance, functional and scope requirements. It involves the anticipation of changes due to changing circumstances and the making of other changes to minimise adverse effects.

The term '**Principal**' means the Minister for a departmental agency, or the agency where it is a state owned corporation or authority, which awards and enters a contract as the customer, and for whom the contract work is done under the terms of a contract (and whose agent invites, receives and processes tenders).

The term '**procurement**' means the collection of activities performed by and for an agency to acquire services and products, including assets, beginning with the identification/detailing of service requirements and concluding with the acceptance (and where applicable, disposal) of the services and products.

The term '**project**' means an undertaking with a defined beginning and objective by which completion is identified. Project delivery may be completed using one contract or a number of contracts.

The term '**service provider**' means a contractor, subcontractor, supplier, consultant (including an agency) and sub-consultant (contracting with a consultant), and their service providers, that contract with a customer to carrying out assets construction, provide other products (including goods) and/or provide services.

The term '**subcontractor**' means an organisation that contracts with a contractor as the customer to carry out construction and related services, and/or provide other products.

The term '**supplier**' means an organisation that contracts with a contractor/Principal to supply a product and/or service.

1. INTRODUCTION

The background

These *Environmental Management Systems Guidelines* are provided to assist agencies, other customers and service providers with the implementation of systematic environmental management that ensures better performance, in accordance with the requirements of the NSW Government Procurement Policy, including the *Code of Practice for Procurement*.

NSW Treasury Circular TC04/07 *Procurement Policy Reform*; the *Code*; *Policy and Guidelines Paper* (TPP04-1) and other information available at http://www.nswprocurement.com.au, describe the Procurement Policy requirements. The Procurement Policy does not bind State Owned Corporations although they are encouraged to use the policy.

The *Code of Practice for Procurement* outlines the NSW Government's expectations of government agencies and those wishing to do business with them as their service providers in procurement. It emphasises the need for all parties to be committed to improving performance, including in environmental management.

The *Code* requires government agencies and their service providers to "identify the environmental opportunities, risks and impacts of their activities". Having done so, it requires that they must then "adopt measures to:

• realise the opportunities, manage those risks, and enhance and protect the environment;

• encourage recycling and re-use of materials and minimise waste; and

• support effective use of scarce resources - including energy, water and materials".

To comply, service providers and their service providers must be able to demonstrate a commitment and an effective systematic approach to environmental management, and acceptable environmental performance.

The *Code* adds that "on construction projects, all service providers are required to develop and implement an appropriate site specific environmental management plan", and "Tenderers and service providers for major contracts are required to have a corporate Environmental Management System accredited by a government agency".

These *Guidelines* apply to all agency construction projects, including those involving private sector investment or financing, and asset development, ownership and operation. They apply to all project and contract activities, from detailing project requirements, option and concept development, and design, to asset construction, maintenance and operation, and ultimately asset demolition and disposal. It is important to recognise that the overall environmental impact of a construction project is influenced by what happens in defining the asset design, before and throughout the life of the constructed asset, and with asset disposal - not just by what happens during the construction phase.

The *Guidelines* with AS/NZS ISO 14001:2004 (*Environmental management systems– Requirements with guidance for use*) provide a framework for applying a systematic approach to environmental management, through an organisation's environmental management system and its use of environmental management plans, in accordance with the *Code*.

The *Guidelines* and their use do not in any way relieve service providers of their legal obligations.

The benefits of an Environmental Management System

A systematic approach to environmental management is the most effective way of improving the environmental performance of an organisation with its projects and, as a result, the performance of the industry in which it operates. Any such improvements then benefit the environment, community, relevant industry, clients and organisation.

Thus a potential primary benefit of an organisation having and implementing an Environmental Management System, providing the systematic approach required, is that it gives the organisation a way of controlling and improving its environmental performance, thereby assisting it to contribute to improvements in the quality of project and environmental performance and in the environment.

Other benefits to an organisation with this approach may include:

- better time, cost and quality control, through an improved understanding of process input requirements, greater process control and more efficient activity, product and service management;
- improved relations with stakeholders (including customers/clients, employees, service providers, shareholders, regulators, lenders and neighbours);
- better development and transfer of knowledge and technology;
- reduced insurance premiums;
- earlier access to emerging markets for both new products and by-products, including items that might previously have been considered wastes;
- improved organisational image and differentiation from competitors and peers;
- improved control over liabilities, leading to greater access to capital;
- improved performance resulting in staying ahead of the competition;
- avoiding unnecessary involvement with regulators; and
- reducing negative perceptions about the organisation in the community.

The benefits available are worth realising and worth the effort needed to achieve the results.

Application of the *Guidelines*

This 2nd edition of the *Guidelines* replaces the 1st edition released in November 1998.

2. GOVERNMENT AGENCY PRACTICE

All contracts

An agency's service providers will prepare and implement an appropriate site-specific Environmental Management Plan, in accordance with the *Guidelines*, for all contracts prior to the commencement of relevant work.

An acceptable Environmental Management Plan will be submitted to the agency before the relevant work commences.

The Plan will be reviewed, and the implementation of the Plan may be reviewed regularly, by the agency for conformity with requirements, and the results of these reviews addressed in accordance with the relevant contract and included in performance assessments.

Major or environmentally sensitive contracts

Organisations seeking to undertake major or environmentally sensitive contracts for an agency are to have a corporate Environmental Management System accredited by a government construction agency, in accordance with the *Guidelines*.

Tenders (including applications for pre-qualification as a tenderer for a range of contracts and expressions of interest for pre-registration as a tenderer for a particular contract) will only be accepted from potential service providers with an accredited Environmental Management System in place.

A Major Contract is defined as:

- a contract having a value of $10 million or more; or
- a contract having a value of under $10 million where the relevant agency determines that:
    - the work if of high environmental risk; or
    - the work interfaces with other projects of high environmental risk; or
    - the work is otherwise sensitive in terms of the environment; or
    - project application will apply at a lower threshold.

MAJOR OR ENVIRONMENTALLY SENSITIVE CONTRACTS

Organisation's accredited Environmental Management System

Environmental Management Plan

ALL CONTRACTS

Environmental Management Plan

Minimum requirements
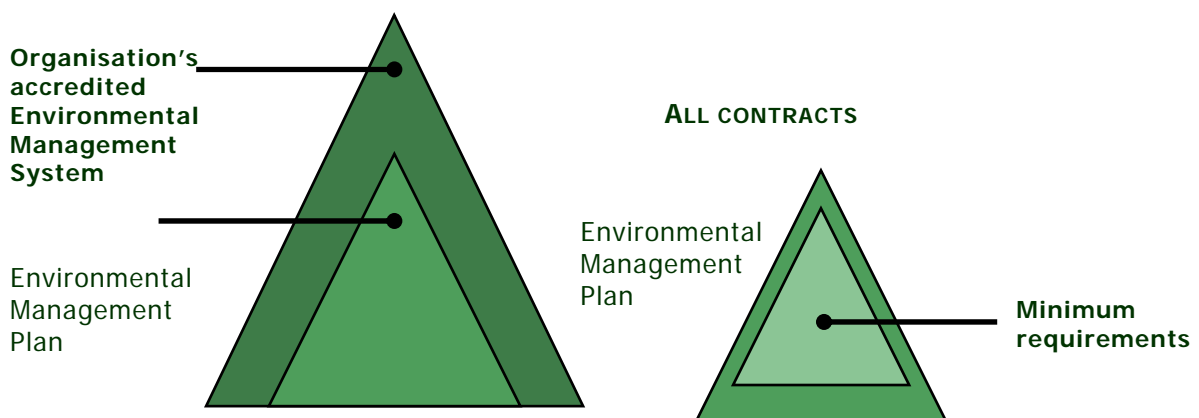
Accreditation of Environmental Management Systems

The suitability for accreditation of an organisation's Environmental Management System will be assessed and determined by the relevant government agency. The organisation will submit its Environmental Management System documents to the agency with which it is seeking to do business.

An organisation's Environmental Management System will be accredited if it meets one of the following requirements:

- it is assessed and accepted by the relevant government construction agency as complying with the requirements of these *Guidelines* and any other requirements of the agency (a sample Environmental Management System checklist is included as Appendix A); or

- it is certified by an appropriately accredited third party certifier as complying with AS/NZS ISO 14001:2004 *Environmental management systems– Requirements with guidance for use*, and this demonstrates that the Environmental Management System addresses the specific requirements of these *Guidelines* (including evidence of implementation) to the satisfaction of the relevant agency.

Following an assessment of an organisation's Environmental Management System documents, a report and recommendation regarding the accreditation sought will be prepared and the recommendation provided to the organisation by the relevant agency.

The organisation will be given an opportunity to comment on the recommendation. The agency will properly consider any comment by the organisation before making a decision on the accreditation sought.

Withdrawal of accreditation

An organisation's Environmental Management System accreditation may be withdrawn by an agency if a review of an Environmental Management Plan or a performance assessment under any contract indicates that the organisation's Environmental Management System is not being implemented satisfactorily or is otherwise not conforming.

Determinations will only made to withdraw accreditation after the organisation has been given an opportunity to comment on the relevant review findings and performance assessments, and the agency has properly considered the organisation's comments.

Agencies may (but are not obliged to) withdraw an organisation's accreditation without further review if it is withdrawn by another government construction agency.

Maintaining records

The construction agencies will maintain records of the environmental performance of their service providers, including:

- Environmental Management System review reports and accreditation status;

- Environmental Management Plan review and performance reports; and

- comments by service providers on review and performance assessment findings.

Access by other agencies

Review and performance reports prepared for one agency are made available to other agencies on request, subject to the provisions regarding the exchange of information on performance reporting between agencies in the documents *Contractor / Consultant*

Performance Reporting and Exchange of Reports between Government Agency Guidelines (available at http://www.nswprocurement.com.au).

Environmental Management Systems development

To maintain or increase tendering opportunities for government work, some organisations will need to seek and obtain Environmental Management System accreditation.

Developing an Environmental Management System for accreditation may not be as difficult or time-consuming as expected.

For example, an organisation involved in a number of contracts where an acceptable Environmental Management Plan has been provided and implemented successfully using systematic environmental management, may find that the organisation's:

- documented procedures identified cover what is to be implemented and maintained in an Environmental Management System for the environmental aspects of its activities, products and services;

- personnel understand the procedures;

- new personnel are being properly trained in accordance with the procedures;

- documented roles, responsibilities and authorities of personnel are clear, well communicated and working;

- performance monitoring and measurement is being properly carried out in accordance with the procedures;

- records are being kept in accordance with the procedures;

- reviews/audits are being performed regularly to suit the procedures; and

- corrective and preventive actions required as a result of the reviews/audits are leading to the procedures and environmental management being fine-tuned and improved.

In this case, in effect, the organisation is implementing a project-based process of continual improvement in environmental management. Having achieved this milestone the organisation should find it worthwhile - and probably a relatively straightforward extra step - to add what is required to develop and document an appropriate Environmental Management System.

3. ENVIRONMENTAL MANAGEMENT PLANS

Requirements

A site-specific Environmental Management Plan is developed and implemented by a service provider (in accordance with its Environmental Management System where in place) for a contract to assist it and its service providers manage environmental performance and conformity with the environmental conditions of the contract. The conditions may include approval/consent/licence/permit conditions for the relevant project/contract. The Plan would identify environmental aspects and significant impacts, and help ensure the related environmental opportunities are realised and risks are properly managed.

Environmental impact assessment undertakings, consent conditions and pollution control approvals may include those identified in a Statement of Environmental Effects or Review of Environmental Factors, development consent conditions under the *Environmental Planning and Assessment Act*, and authority licence and permit conditions for contract work. Service providers must ensure they are aware of and address all statutory obligations attached to their activities under a contract.

In identifying environmental risks, opportunities and impacts, a service provider would consider whether any of the organisation's activities (including decisions), products and services relevant to the contract will have any impact on the environment, including air, water or land, or involving waste, emissions, resource uses and any physical attributes.

With some of contracts this may entail the asking of basic questions such as:

Air

What sort of polluting emissions to the air will result from the organisation's activities, such as dust, smoke or exhaust fumes? Will noise levels resulting from the activities be above those specified in consent and/or licence conditions or above those recommended by the NSW Department of Environment, Climate Change and Water?

Water

How much water does and will the organisation use with its activities, products and services? Where does or will waste water go? Is anything (including sediment or other pollution) discharged or spilled, or will it discharge or spill into drains or watercourses (rivers, streams, ponds, dams and the like)?

Land

Do or will any of the organisation's activities, products and services affect the soil, local wildlife/fauna or plants/flora (including through erosion and with pollution), or heritage items or other physical attributes?

Waste

What materials, energy and other resources does/will the organisation waste with its activities, products and services? What waste can be reduced? Is recycling an option?

All

What opportunities are there to reduce or avoid emissions, water misuse, land degradation, wildlife/fauna or plant/flora loss, and waste?

In asking these questions the service provider under a construction contract would identify and take into account, with the related risks and opportunities:

- the environmental impacts of its design and material/product/system selection decisions, during the whole life of the asset to be constructed;

- the impacts of the decisions made regarding the manufacture, packaging and transport of products;

- reasonably anticipated impact events such as disturbance, damage, spillages, breakdowns and inclement weather changes, which could affect and result from its day-to-day activities in construction; and

- the potential for impacts, after the asset has been constructed, of the decisions and other actions during its construction.

Having initially identified the environmental risks, opportunities and impacts, the service provider must then determine how the organisation is to manage these - for example - *How will design minimise energy use and allow for and use the natural environment? How will materials/products/systems be selected or designed to minimise adverse impacts and/or benefit the environment? How will paintbrushes be washed? How will soil erosion be controlled if it rains?*

All of this must be documented and communicated so that everybody working on the contract will know at least:

- **what significant environmental risks and opportunities are involved;**

- **what procedures are in place to manage these risks and opportunities;**

- **who is responsible for ensuring that the procedures are followed;**

- **what to do and who to contact if there is an incident/emergency.**

While the service provider normally develops the Environmental Management Plan required for a contract, for some contracts an agency or other customer may produce a Plan, allowing for the significant impacts with service provider's activities, products and services.

For these contracts (as defined by the relevant agency or other customer) service providers would be required to operate under, augment (to allow for their specific personnel and activities) and implement the nominated Environmental Management Plan provided.

For larger contracts where more complex environmental aspects are involved and more management is required, the Environmental Management Plan would address all the key elements of an Environmental Management System.

Environmental Management Plan elements

The scope of an Environmental Management Plan will vary, depending on the nature of the environmental impacts and the contract involved.

For all contracts

All Environmental Management Plans would cover at least the following five elements to suit the service provider's Environmental Management System (as applicable) and the AS/NZS ISO 14001 clauses indicated in brackets for a System.

Commitment and policy (4.2 & A.2)

1. Objectives of the Environmental Management Plan related to the service provider's environmental policy and associated top management commitment.

Planning (4.3 & A.3)

2. Identification of the environmental aspects and significant related impacts associated with the work (4.3.1 & A.3.1), including:

    - specific undertakings arising from any formal environmental impact assessment (4.3.2 & A.3.2);

    - relevant development consent conditions (4.3.2 & A.3.2);

    - pollution control approvals and any conditions attached to the approvals (4.3.2 & A.3.2);

    - other statutory and contract obligations (4.3.2 & A.3.2);

    - environmental risks and opportunities with significant impacts (4.3.1 & A.3.1); and

    - environmental objectives, targets and measures (where practical) for the significant impacts, risks and opportunities (4.3.3 & A.3.3).

Implementation (4.4 & A.4)

3. Documented procedures to be followed to manage the aspects and significant impacts, risks and opportunities identified, in accordance with the requirements of the responsible agency and the contract involved (4.4.6 & A.4.6).

4. A clear indication of the respective environmental management roles and responsibilities of the service provider and its service providers (4.4.1 & A.4.1).

5. Emergency response procedures, covering the details required (4.4.7 & A.4.7).

For major or environmentally significant contracts

Typical contents of an Environmental Management Plan for major or environmentally significant contracts would include the above five elements, augmented by the elements below.

Implementation (4.4 & A.4)

6. Identification of organisational and individual roles, responsibilities and authorities for establishing, implementing and maintaining procedures to ensure conformity with each environmental management requirement (4.4.1, 4.4.6, A.4.1 & A.4.6).

7. Identification of organisational and individual roles, responsibilities and authorities for monitoring activities and performance to suit each environmental management requirement, including supervisory/management protocols and the appointment of an environmental manager(s) (4.4.1, 4.5, A.4.1 & A.5).

8. Further documented procedures, with roles, responsibilities and authorities, for controlling all activities/processes and performance, to suit each environmental management requirement (such as for the management of service providers, training of personnel, ensuring conformity with and communicating requirements, keeping records, providing regular reports, and other relevant activities such as with compliance bonds/undertakings and penalties for nonconformity) (4.4.2, 4.4.3, 4.4.4, 4.4.5, 4.4.6, A.4.2, A.4.3, A.4.4, A.4.5 & A.4.6).

9. Cross-references to, or inclusion of, other environmental and other management related documents (such as a work method statements, design plan, landscape plan, soil and water management plan, statement of heritage significance, incident management plan, traffic management plan, communications plan, quality management plan, industrial relations/training plan, quality management

plan, and occupational health and safety (OHS) management plan) (Introduction, 4.4.5 & A.4.5).

Monitoring, measurement, evaluation and review (4.5 & A.5)

10.   Monitoring, measurement, evaluation and review (including audit) procedures, including provisions for review criteria/measures/scope/personnel/program, addressing the consequences of nonconformities, investigation, analysis, evaluation, corrective/preventive action and follow-up verification.

Environmental Management Plan reviews

Under applicable contracts, before relevant work commences and from time to time thereafter, agencies will arrange for the service provider's Environmental Management Plan and its implementation to be reviewed. The reviews will include an on-site evaluation of the extent to which the service provider has correctly implemented and conformed with the Plan generally. The reviews/audits completed of the Plan and its implementation by the service provider may be taken into account in reviews by agencies.

A sample Environmental Management Plan review checklist is included as Appendix B.

An independent or in-house reviewer may be appointed by the agency to manage a review. The communication with the service provider regarding reviews will be in accordance with the contract, including the notice of an impending Environmental Management Plan review.

The number of reviews and the scope of each review by the agency for each contract will be determined by the agency and will depend on the size and nature of the contract.

All such reviews will be carried out:
- with honesty and fairness;
- with full regard to confidentiality;
- with reasonable skill and care; and
- in a timely manner.

For the purposes of a review, the reviewer will be allowed access to the service provider's environmental management records and be entitled to obtain any information and explanations required from the service provider.

The reviewer will provide a written report to the agency on the service provider's conformity with Environmental Management Plan requirements. Any irregularities/nonconformities found during the review will be noted in the report.

Any constraints that impair the reviewer's ability to express an unqualified opinion will be noted and an appropriately qualified opinion expressed in the report.

The agency will forward a copy of the report to the service provider. The service provider will correct any nonconformities identified, and may comment on the report findings. The agency will properly consider any comment before acting on the report.

4. ENVIRONMENTAL MANAGEMENT SYSTEMS

Requirements

An Environmental Management System comprises of those elements of an organisation's overall management system that ensure environmental aspects of its activities, products and services, and their significant impacts are identified and systematically managed.

An Environmental Management System involves an organisation:

- accepting that its activities, products and services have an impact on the environment;

- developing an environmental policy that has the total support of top management;

- having planning procedures in place to identify environmental aspects, risks, opportunities and impacts;

- having planning procedures in place to develop processes to mitigate and minimise environmental risks and to realise opportunities;

- establishing roles, responsibilities and authorities for personnel in, and procedures for, implementing the required processes;

- establishing procedures for reviewing the System and the implementation of processes; and

- establishing a process for management review of the System and its implementation, which supports the environmental policy, and pursues continually improving environmental performance.

Key elements of an Environmental Management System

To meet minimum requirements for accreditation, an Environmental Management System would address the following key elements to suit the AS/NZS ISO 14001 clauses indicated in brackets for a System. A sample Environmental Management System checklist is included as Appendix A.

Commitment and policy (4.2 & A.2)

1. Environmental policy

Planning (4.3 & A.3)

2. Review and identification of environmental aspects and impacts (4.3.1 & A.3.1)

3. Identification of legal and other requirements (4.3.2 & A.3.2)

4. Setting objectives and targets (4.3.3 & A.3.3)

Implementation (4.4 & A.4)

5. Resources (4.4.1 & A.4.1)

6. Roles, responsibility and authority (4.4.1 & A.4.1)

7. Competence, training and awareness (4.4.2, 4.4.3, A.4.2 & A.4.3)

8. Documentation (4.4.4, 4.4.5, A.4.4 & A.4.5)

9. Operational control (4.4.6 & A.4.5)

10. Emergency preparedness and response (4.4.7 & A.4.7)

Measurement, evaluation and response (4.5 & A.5)

11. Monitoring and measuring performance (4.5.1, 4.5.2, A.5.1 & A.5.2)

12. Corrective and preventive action (4.5.3 & A.5.3)

13. Control of records (4.5.4 & A.5.4)

Review (4.5, 4.6, A.5 & A.6)

14. Internal and management review (4.5.5, 4.6, A.5.5 & A.6)

The following two optional elements may also be considered for inclusion, but are not required to allow accreditation.

15. External communication (4.4.3 & A.4.3)

16. Third party certification (4.5 & A.5)

1. Environmental policy

This element is about top management confirming the organisation's commitment to continual improvement in environmental performance and defining its policy and a framework for setting/reviewing objectives and targets. It spells out key responsibilities for environmental management and for verification of the System. The policy would be articulated and documented in conjunction with the Planning elements 2 to 4 described below.

To ensure the effectiveness and success of an Environmental Management System, one of the early steps in its development or improvement involves obtaining the commitment of the organisation's top management to continually improve performance with environmental aspects of its activities, products and services. Ongoing commitment and leadership from the top are vital to effective environmental management.

The organisation's top management would make a clear statement of environmental policy and its commitment to continual improvement in environmental performance. In adopting an environmental policy the organisation also sets overall objectives and targets by which its environmental performance will be judged.

The policy would:

• have the full support and commitment of the Chief Executive Officer and other top management;

• be relevant to the environmental aspects of the organisation's activities, products and services and their significant impacts;

• reflect the organisation's stated values and guiding principles;

• provide a framework for the setting and reviewing of environmental objectives and targets; and

• cover the other requirements, such as applicable legal requirements, use of appropriate technology and management practices;

• be documented, made publicly available, implemented and maintained, and communicated to all personnel,

be in accordance with AS/NZS ISO 14001 clauses 4.2 and A.2.

2. Review and identification of environmental aspects and impacts

This element is about identifying the environmental aspects of the organisation's range of activities, products and services, and the related environmental risks and opportunities, and significant impacts.

Organisations would consider and assess which aspects of their activities, products and services involve an interaction with the environment, and identify the risks and opportunities involved, and the resulting significant impacts in accordance with AS/NZS ISO 14001 clauses 4.3.1 and A.3.1.

This is an ongoing review process that identifies and assesses past, present and potential future impacts. The review includes revisiting existing environmental

management assessments and procedures. An important part of the review is for the organisation to identify the legislation and regulations affecting the environmental aspects of its activities, products and services, and the related risks and opportunities involved.

For example:

In examining the activity of forming and pouring concrete, a service provider might recognise that one of the environmental risks is that waste formwork and reinforcing steel will be generated. An adverse impact is that this waste could use up landfill in a tip. There is an opportunity to reduce waste, and reuse and recycling waste formwork and steel, to reduce the impact and reduce the formwork/steel otherwise required and/or realise the scrap timber and steel value.

3.   Identification of legal and other requirements

This element is about the organisation identifying and addressing legislative, contractual, regulatory and any other environmental requirements.

To maintain legal and other compliance, the organisation must identify and understand and address the regulatory and other requirements applicable to environmental aspects of its activities, products and services in accordance with AS/NZS ISO 14001 clauses 4.3.2 and A.3.2.

To keep track of legal requirements, the organisation would establish and maintain a list of all laws and regulations relevant to the environmental aspects and impacts of its activities, products and services (refer to Appendix C).

4.   Setting objectives and targets

This element is about the organisation setting objectives and targets to suit the environmental policy, aspects and significant impacts.

The objectives are the overall goals for environmental performance required to implement the policy, having regard to the environmental aspects and significant impacts identified in environmental reviews. Environmental targets would be set to help define and achieve these objectives within a specified time frame. Each target would be specific and measurable. These processes would be in accordance with AS/NZS ISO 14001 clauses 4.3.3 and A.3.3.

For example:

An objective might be 'to reduce waste to landfill'. A service provider's target might be 'to reduce wastage of steel to a maximum of 2%'. One of the measures could be the amount of waste steel in bins as a proportion of the amount of steel purchased. Another could be the proportion of waste steel that is recycled.

5.   Resources

This element is about the organisation identifying and providing the resources necessary to establish, implement and maintain/improve the Environmental Management System.

The resources essential to the implementation of the organisation's environmental policy and the achievement of environmental objectives and targets would be defined in the Environmental Management System and then made available in its development and implementation in accordance with AS/NZS ISO 14001 clauses 4.4.1 and A.4.1.

Resources include human, physical (such as technology, facilities, materials and equipment) and financial. In allocating resources, the organisation would have procedures to monitor and measure (as for element 11) the benefits and costs of its environmental management, and assess and respond to the resource needs indicated.

6. Roles, responsibility and authority

This element is about the organisation defining the roles, responsibilities and authorities of all personnel whose activities can affect the environment.

Personnel at all levels are accountable legally and otherwise for environmental performance, within the scope of their defined and inferred roles and responsibilities, including in supporting the Environmental Management System.

Clearly spelling out the roles, responsibilities and authorities of personnel relating to environmental management, in accordance with AS/NZS ISO 14001 clauses 4.4.1 and A.4.1, ensures it is clear who is responsible for making decisions and taking action, including with the management of actual and potential nonconformities, other problems and incidents.

Specific environmental roles/tasks/activities/processes for which responsibilities and authorities would be defined, both in job descriptions and procedures include, but are not limited to:

- defining environmental policy, aspects, significant impacts, requirements, objectives, priorities and targets;
- defining the roles, responsibilities and authorities of personnel for environmental management;
- allocating sufficient human, physical and financial resources for environmental management, and monitoring/measuring performance and adjusting the allocations to suit;
- ensuring compliance with environmental legislation, regulations and approval/ permit/licensing conditions;
- keeping abreast of changes in legislation and regulations;
- acquiring and communicating/disseminating environmental management information;
- planning and conducting training in environmental management, including induction for new employees and refresher training;
- developing and implementing appropriate documented procedures generally;
- assessing service providers' abilities to conform and their conformity with environmental management requirements;
- ensuring conformity with environmental management requirements; and
- ensuring the use of appropriate technology and management practices.

A management representative(s) would be nominated to be responsible for ensuring that the organisation's Environmental Management System meets requirements; the System is established, implemented and maintained; and performance is reported in accordance with AS/NZS ISO 14001.

7. Competence, training and awareness

This element is about the organisation ensuring personnel are competent, including identifying and providing for the training needs of personnel.

The organisation must ensure all personnel able to influence environmental performance have the necessary education, skills, experience and knowledge. This includes training all personnel; ensuring they are kept informed about changes, risks/opportunities, their roles and required procedures; and generally ensuring they are able to meet environmental management requirements.

This is particularly important on construction projects, which involve inherent environmental risks, frequently changing site conditions, and risks to the environment

with the incorrect performance of simple tasks (such as the incorrect disposal of waste, spillages or inadequate provisions for erosion control).

Organisations therefore must, address this element in accordance with AS/NZS ISO 14001 clauses 4.4.2, 4.4.3, A.4.2 and A.4.3, including:

- identifying the environmental training needs of all personnel involved;
- communicating all relevant information regarding environmental management to all the personnel involved;
- ensuring that all personnel undergo the necessary induction and task training to ensure their awareness of their roles and understanding of, and conformity with, environmental management procedures and requirements; and
- maintaining appropriate records of environmental management training.

Effective environmental management requires personnel to make sound individual judgement and take personal responsibility, including for compliance with procedures.

Training programs build the understanding and a capability of personnel to accept responsibility, as well as their awareness of the environmental risks and opportunities involved, and the procedures and requirements to be addressed.

Induction training (of new personnel and in new processes) allows for changing conditions, such as with new work sites. Refresher training covers the changes over time involved, such as with some long duration work sites, contracts and projects.

A properly designed training program would consider the training needs for each work phase, activity and process, and ensure that qualified and experienced persons deliver the training required.

8. Documentation

This element is about the organisation ensuring that that all personnel are able to share a common understanding of the System, by ensuring that environmental management requirements are documented, authorised and able to be communicated effectively throughout the organisation.

Projects depend for their success on accurate and detailed documents such as briefs, design plans, specifications, standards and codes. These include documents dealing with and supporting environmental management.

The organisation would ensure all Environmental Management System documents, including procedures, work instructions, checklists and forms, are available and appropriate before they are used, in accordance with AS/NZS ISO 14001 clauses 4.4.4, 4.4.5, A.4.4 and A.4.5.

The documents assist the organisation to ensure that at any point:

- the roles, responsibilities, procedures and other requirements for achieving environmental objectives and targets are identified, documented and communicated;
- appropriate records are maintained;
- the documents being used are appropriate, accurate, easy to understand and up to date;
- the documents are readily available to all people who need them, where and when they need them;
- changes are recorded and, unless otherwise required, old documents are removed from use; and
- documents are periodically reviewed, updated and otherwise revised as necessary, and approved by authorised personnel prior to their issue.

Organisations' documented quality and OHS management systems may be extended to allow for, or integrated with, what is needed to address and incorporate environmental management system requirements. Alternatively, a separately documented Environmental Management System may be used.

Either approach would be appropriate, if the System is effective and facilitates continual improvement.

The nature of the System documentation will vary to suit the size and complexity of the organisation.

9. Operational control

This element is about the organisation establishing, implementing and maintaining procedures and controls to ensure that the organisation's environmental policy, objectives and targets are met with its operations.

A procedure may cover a specific task, activity or process, or a number of tasks, activities or processes, undertaken by the organisation, its service providers and their service providers in carrying out the work required. The procedure would identify the controls to be put in place to achieve the related objectives and targets.

To ensure effective environmental management, the organisation would have procedures that cover all its activities and processes contributing to significant environmental impacts with its operations, in accordance with AS/NZS ISO 14001 clauses 4.4.6 and A.4.6.

The operations may include planning, designing, purchasing, contracting, management of service providers, handling and storage of materials (hazardous or otherwise), disposal of wastes, recycling, air/water/land/heritage management, decontamination/ remediation/restoration and asset maintenance.

Each procedure would detail as a minimum:
- the tasks, activities, processes, objectives and targets involved;
- the manner of providing and completing each process, activity and task;
- the use of suitable equipment and other resources;
- compliance with standards, codes and other requirements;
- the standards of workmanship, product and/or service required;
- approval processes;
- the records required; and
- the required qualifications, skills and knowledge of the personnel involved.

10. Emergency preparedness and response

This element is about the organisation ensuring that emergency plans or procedures are in place identifying potential incidents, such as emergencies or accidents, that can impact on the environment, and the responses required if an incident occurs (such as a chemical spill, damaged water pipelines, run-off due to heavy rainfall).

The organisation and procedures would address the requirements of AS/NZS ISO 14001 clauses 4.4.7 and A.4.7, including identifying:
- emergency organisation details and responsibilities;
- a list of key personnel to contact with full contact details;
- details of emergency services (such as ambulance, fire brigade, spill clean-up services);
- communications strategy (internal and external) and training plans;

- details of actions to be taken in the event of the various types of emergencies, accidents and other incidents possible;

- location of information on hazardous materials, including each material's potential impact on the environment and measures to be taken in the event of accidental release or other misuse; and

- plan effectiveness testing, review and revision procedures.

11. Monitoring and measuring performance

This element is about the organisation routinely monitoring environmental performance to ensure that conformity with environmental requirements and other environmental performance are measured and evaluated.

With each significant impact, objective and target, performance would be measured and compared with the target, and conformity with each procedure would be monitored and evaluated, in accordance with AS/NZS ISO 14001 clauses 4.5.1, 4.5.2, A.5.2 and A.5.2.

For example:

If an organisation was aiming to achieve a target of a maximum wastage of steel of 2% of total usage, the following procedures would be necessary: -

1. Measurement and checking of all material coming to each work site -

This would not be unusual on any work site as the organisation would check supplied and invoiced quantities. The check would satisfy accounting, safety and quality criteria (such as correct type and quantity, correct packaging and labelling, correct documentation and whether there is any transit damage), as well as the environmental criteria, and would be carried out by suitable qualified personnel.

2. Separation of waste on each work site to allow waste material to be managed -

Apart from being an environmental and waste management benefits there are cost savings to be realised with this practice, including with recycling.

3. Measurement of waste as it leaves each work site or as it is accepted at the disposal site or scrap yard -

This procedure could be carried out anyway to determine any tipping fee or scrap payment.

4. Calculation of the percentage of wasted steel and performance relative to target -

The percentage would be readily calculated using the measurements above and compared with the target, and the performance evaluated.

12. Corrective and preventive action

This element is about the organisation ensuring that environmental incidents and actual/potential nonconformities are addressed effectively and recurrences prevented.

Corrective and preventive actions are concerned with what an organisation does to keep improving its environmental performance.

Environmental performance reviews and environmental incidents provide definite pointers to unsound work practices and performance requiring action. Incidents and performance would be recorded, investigated and analysed, to facilitate improvements in policy, procedures and work practices to progressively improve the organisation's environmental performance.

However, action would not only wait until a review is carried out or an incident occurs. Workplace activities would be analysed and evaluated regularly to identify performance issues and risks, and ensure the action required to reduce the risks, improve performance and prevent incidents.

The procedures would cover and processes include ensuring and reviewing the effectiveness of the corrective and preventive actions taken. The element would be addressed in accordance with AS/NZS ISO 14001 clauses 4.5.3 and A.5.3.

Action undertaken after reviewing past errors or anticipating future problems is part of the learning that enables an organisation to keep improving its environmental performance.

The procedures would cover and processes include recording the results of performance monitoring/analysis and evaluation, preventive and corrective action, and reviews of the action taken.

13. Control of records

This element is about the organisation establishing and implementing procedures for the identification, filing, use, storage, protection, retrieval, retention and disposal of environmental management records.

Records must be kept to provide evidence of, and report on, performance. This includes recording the implementation of, and conformity with, the organisation's Environmental Management System and environmental requirements, including providing evidence of compliance with regulations, legislation and legal requirements generally. The element would be addressed in accordance with AS/NZS ISO 14001 clauses 4.5.4 and A.5.4 to provide the effective management of the records required.

These records would include:
- legislative and regulatory requirements;
- approvals, permits and licences;
- details of qualifications held by individuals;
- monitoring/inspection reports on performance;
- internal review reports;
- external review reports;
- reports of environmental incidents, complaints and follow-up action;
- minutes of environmental management meetings generally;
- incident and performance analyses and evaluation reports;
- performance targets and measurements;
- minutes of management review meetings;
- reports on and evidence of action taken;
- induction and training records;
- contract information; and
- service provider information.

A complex range of information is usually involved, and procedures for the control of records would vary to suit the organisation and its operations.

14. Internal and management review

This element is about the organisation establishing a program of internal reviews and management reviews to verify that the System is being implemented and adhered to, and is effective, and that there is a continual improvement in performance.

The organisation would have planned internal reviews to verify that its Environmental Management System and environmental management match its stated policy, and meet objectives, targets and other requirements, and to verify that the actions resulting from reviews are effective, in accordance with AS/NZS ISO 14001 clauses 4.5.5 and A.5.5 (and AS/NZS ISO 19011:2002).

Planned top management reviews of the Environmental Management System, and the policy included, would also be conducted to ensure its suitability, adequacy and effectiveness, and to identify the action required to ensure this is achieved, in accordance with AS/NZS ISO 14001 clauses 4.6 and A.6.

The results of reviews would be brought to the attention of the people responsible, who would then be required to ensure that corrective or preventive action is taken immediately to remedy any deficiencies.

The Environmental Management System, and the organisation's environmental performance, would then continually improve as a result of such reviews and action.

15. External communication

This element is about the organisation's external communication of environmental information, including reporting as a voluntary disclosure of information about environmental performance. Communication may be targeted at the organisation's employees, customers and anybody else interested in the environmental performance of the organisation.

The element would be addressed in accordance with AS/NZS ISO 14001 clauses 4.4.3 and A.4.3. Any report on environmental performance would include statistical or quantitative information rather than just qualitative remarks. This information would also be linked to the targets identified so that the report is part of the process of continual improvement and verifiable by a third party.

A report could cover the outcome of reviews, performance monitoring and other activities for some or all of the organisation's operations.

For example:

An environmental report might say 'in the last year the organisation reduced its waste to land fill by crushing waste concrete and reusing it as fill'. While this is an admirable endeavour it gives little indication of the organisation's environmental performance.

An example of a better environmental report would be to say 'last year the organisation reduced its waste to landfill by x m3 by crushing y tonnes of waste concrete to be reused as selected fill and road base material. The percentage of waste concrete crushed, 87%, is an improvement on the previous year's figure of 80%, and the organisation's target for next year is 95%'.

16. Third party certification

This element is about the organisation using an independent certifier to affirm that the Environmental Management System meets all the requirements of an accepted standard and/or meets other conditions.

The international standard for environmental management is the ISO 14000 series. Other standards include BS 7750 and the European Community's EMAS.

Seeking third party certification of an Environmental Management System may be of assistance to the organisation in ensuring its effectiveness. It may also be useful for organisations wishing to demonstrate they satisfy the requirements of their local and international customers.

APPENDIX A - ENVIRONMENTAL MANAGEMENT SYSTEM ACCREDITATION CHECKLIST

This checklist has been designed to assist government construction agencies and others in examining an organisation's Environmental Management System.

It may also assist organisations as a guide when developing their Environmental Management Systems.

Key to symbols to be used in check-boxes is:

✔ = Yes   ✘ = No   0 = Not applicable

Accreditation by another government construction agency

Q1   Is the organisation's Environmental Management System currently accredited by another government construction agency? (If so, the agency may wish to accept this as sufficient)

❑   (If ✔ please give details)...

Q2   Has the organisation provided satisfactory evidence of effective System implementation through the following?

❑   minutes of management reviews.

❑   internal or external review reports (give details).

❑   typical Environmental Management Plan and its verified implementation.

Q3   Has any government construction agency withdrawn the organisation's Environmental Management System accreditation?

❑   (If ✔ please give details)...

If the answers to these questions are satisfactory (that is ✔ to Q1 and Q2 and ✘ to Q3) and this is supported by documentation, this is sufficient evidence that the organisation's Environmental Management System meets the accreditation requirements and no further assessment is necessary unless the agency determines otherwise.

Certification under AS/NZS ISO 14001:2004

Q1   Is the organisation's Environmental Management System currently certified by an accredited certifier as being in accordance with AS/NZS ISO 14001?

❑   (If ✔ please give details)...

Q2   Has the organisation provided satisfactory evidence of effective System implementation through the following?

❑   minutes of management reviews.

❑   internal or external review reports (give details).

❑   typical Environmental Management Plan and its verified implementation.

Q3   Has any government construction agency withdrawn the organisation's Environmental Management System accreditation?

❑   (If ✔ please give details)...

If the answers to these questions are satisfactory (that is ✔ to Q1 and Q2 and ✗ to Q3) and that is supported by documentation, this is sufficient evidence that the service provider's Environmental Management System meets the accreditation requirements and no further assessment is necessary unless the agency determines otherwise.

Detailed assessment by agency

When an organisation is seeking accreditation of an Environmental Management System that has not been accredited by another agency or has not been certified as in accordance with AS/NZS ISO 14001, or where an agency requires a detailed assessment for accreditation, the following checklist may be used.

Commitment and policy

Does the organisation's environmental policy:

❑ have the documented support and commitment of the Chief Executive Officer and senior management to continual improvement?

❑ relate appropriately to the environmental aspects of the organisation's activities, products and services and their significant impacts?

❑ reflect the organisation's stated values and guiding principles?

❑ provide a framework for the setting of environmental objectives and targets?

❑ cover the other requirements, such as applicable legal requirements, use of appropriate technology and management practices?

❑ **Is the policy documented and made public, and is there evidence it is communicated, implemented and maintained?**

Planning

Is there documented evidence:

❑ that the environmental risks and opportunities with, and significant impacts of, environmental aspects of the activities, products and services that the organisation provides have been identified, fully considered and taken into account in the System?

❑ that legal and other requirements with each of the environmental aspects of its activities, products and services has been identified with their application, and taken into account in the System?

❑ that the organisation's environmental objectives and measurable targets, and program(s) for their achievement, have been identified for the legal and other requirements, and environmental aspects and significant impacts identified above?

Are there documented procedures implemented and maintained:

❑ for ensuring the actions in the above three items are taken?

❑ for ensuring that the information involved is regularly kept up to date?

Implementation

Is there documented evidence:

❑ that the roles, responsibilities and authorities of personnel involved in environmental management are identified, documented and communicated?

❑ that there is a management representative(s), appointed by top management, responsible for ensuring that the Environmental Management System is

established, implemented and maintained, in accordance with requirements, and for reporting on this and recommending improvements to top management?

❑ that the education, skills, experience and knowledge of personnel involved in environmental management are identified, documented, and compared and confirmed as conforming with requirements?

❑ that the Environmental Management System covers environmental management training needs and that these requirements are identified in the organisation's training and induction program(s)?

that this includes:

❑ identifying the environmental training needs of all personnel involved?

❑ communicating all relevant information regarding environmental management to all the personnel involved?

❑ ensuring that all personnel undergo the necessary induction and task training to ensure their awareness of their roles and understanding of, and conformity with, environmental management procedures and requirements?

❑ maintaining appropriate records of environmental management training?

❑ that sufficient resources are identified and available for environmental management?

Are there people with sufficient other resources within the organisation nominated to:

❑ define environmental policies, aspects, significant impacts, requirements, objectives, priorities and targets?

❑ define the roles, responsibilities and authorities of all personnel for environmental management?

❑ allocate sufficient human, technical and financial resources for environmental management, and monitor/measure results and adjust the allocations to suit?

❑ ensure compliance with environmental legislation, regulations and approval/ permit/licensing conditions?

❑ keep abreast of changes in legislation and regulations?

❑ acquire and communicate/disseminate environmental management information?

❑ plan and conduct training in environmental management, including inducting new employees and refresher training?

❑ oversee and undertake the development and implementation of appropriate documented environmental management procedures generally?

❑ assess service providers' abilities to conform and their conformity with environmental management requirements?

❑ ensure conformity with environmental management requirements?

❑ ensuring the use of appropriate technology and management practices?

❑ other roles/tasks? (give details) ....

Are there documented procedures for:

❑ planning? (give details) ....

❑ designing, including material/product/system selection? (give details) ....

❑ purchasing? (give details) ....

❑ contracting, including tendering and contract management? (give details) ....

❑ engagement and management of service providers? (give details) ....

❑ handling and storage of materials (hazardous or otherwise)? (give details) ....

❑ disposal of wastes? (give details) ....

❑ recycling? (give details) ....

❑ air quality control, such as with dust, smoke and noise emissions, fumes and other emissions? (give details) ....

❑ water use and pollution management? (give details) ....

❑ land management, including soil, wildlife/fauna and plants/flora? (give details) ....

❑ heritage management? (give details) ....

❑ other physical attributes management? (give details) ....

❑ decontamination/remediation/restoration? (give details) ....

❑ asset maintenance? (give details) ....

❑ all other activities/processes contributing to significant environmental impacts? (give details) ....

❑ emergency responses to identified potential incidents, such as emergencies or accidents, that can impact on the environment, which include plans/procedures covering and details of:

  ❑ emergency organisation details and responsibilities?

  ❑ key personnel to contact with full contact details?

  ❑ details of emergency services (such as ambulance, fire brigade, spill clean-up services)?

  ❑ communications strategy (internal and external) and training plans?

  ❑ actions to be taken in the event of the various types of emergencies, accidents and other incidents possible?

  ❑ information on hazardous materials, including each material's potential impact on the environment and measures to be taken in the event of accidental release or other misuse?

  ❑ plan effectiveness testing, review and revision procedures?

  ❑ other activities? (give details) ....

❑ training and induction?

❑ documentation, records and information management?

Do the documented procedures each cover:

❑ the tasks, activities, processes, objectives and targets involved?

❑ the manner of providing and completing each process, activity and task?

- ❑ the use of suitable equipment and other resources?
- ❑ compliance with standards, codes and other requirements?
- ❑ the standards of workmanship, product and/or service required?
- ❑ approval processes?
- ❑ the records required?
- ❑ the qualifications, skills and knowledge required of the personnel involved?
- ❑ other details? (give details) ....

Do the documented procedures for documentation provide that:

- ❑ the documents being used are appropriate, accurate, easy to understand and up to date?
- ❑ the documents are readily available to all people who need them, where and when they need them?
- ❑ changes are recorded and, unless otherwise required, old documents are removed from use?
- ❑ documents are periodically reviewed, updated and otherwise revised as necessary, and approved by authorised personnel prior to their issue?
- ❑ appropriate records are maintained?

Are there records kept for:

- ❑ legislative and regulatory requirements?
- ❑ approvals, permits and licences?
- ❑ details of qualifications held by individuals?
- ❑ monitoring/inspection reports on performance?
- ❑ internal review reports?
- ❑ external review reports (where applicable)?
- ❑ reports of environmental incidents, complaints and follow-up action?
- ❑ minutes of environmental management meetings generally?
- ❑ incident and performance analyses and evaluation reports?
- ❑ performance targets and measurements?
- ❑ minutes of management review meetings?
- ❑ reports on and evidence of action taken?
- ❑ induction and training records?
- ❑ contract information?
- ❑ service provider information?
- ❑ other activities? (give details) ....

Measurement, evaluation and response

Is there documented evidence:

- ❑ of documented procedures for planning and implementing environmental performance monitoring, measuring and evaluation?

❑ that with each significant impact, objective and target, performance is measured and compared with the target, and conformity with each procedure is monitored and evaluated?

❑ of documented procedures for the identification, filing, use, storage, protection, retrieval, retention and disposal of environmental management records?

Are there documented procedures for corrective and preventive action which include:

❑ environmental performance reviews?

❑ investigation, analysis and evaluation of the causes of incidents, poor performance and recorded measurements?

❑ determining the corrective and preventive action needed?

❑ analysis for identifying and evaluating further environmental risks and opportunities arising from reviews?

❑ implementing corrective and preventive action and follow-up verification, reviewing the effectiveness of the actions taken?

❑ recording the results of performance monitoring/analysis and evaluation, preventive and corrective action, and reviews of the action taken?

Review

Is there documented evidence:

❑ that the Environmental Management System has been reviewed under a review program to determine whether the System conforms to planned requirements (with policy, plans, procedures, objectives and targets, and other requirements), and is being correctly implemented and maintained?

❑ that there is effective corrective and preventive action and follow-up following the reviews, including reporting to management?

❑ that the Environmental Management System has been reviewed under a review program by top management to ensure its continuing suitability, adequacy and effectiveness?

❑ that these reviews are regular and sufficient?

❑ that there is effective corrective and preventive action and follow-up following these reviews, including reporting?

APPENDIX B - ENVIRONMENTAL MANAGEMENT PLAN REVIEW CHECKLIST

This checklist has been designed to assist government agencies and others in reviewing service providers' Environmental Management Plans. It may also assist service providers in developing their Environmental Management Plans and reviewing their service providers′ Environmental Management Plans.

Key to symbols to be used in check-boxes is:

✓ = *Yes*   ✘ = *No*   0 = *Not applicable*

Minimum requirements for all contracts

Does the Environmental Management Plan include:

❑ a statement of objectives?

❑ a listing of the environmental aspects, (with risks and opportunities) and significant related impacts associated with the work?

Do the environmental aspects and impacts listed include:

❑ specific undertakings arising from any formal environmental impact assessment?

❑ relevant development consent conditions?

❑ pollution control approvals/licences/permits and any conditions attached to these?

❑ other statutory and contract obligations?

❑ environmental risks and opportunities with significant impacts with the activities involved?

❑ environmental objectives, targets and measures (where practical) for the significant impacts, risks and opportunities?

Does the Environmental Management Plan include:

❑ documented procedures to be followed to manage the identified aspects and significant impacts, risks and opportunities identified? (These measures are subject to compliance with the contract involved)

❑ a clear indication of the respective environmental management roles and responsibilities of the service provider and its service providers?

❑ emergency response procedures, covering the details required?

Is it demonstrated that all personnel:

❑ are or will be familiar with the Environmental Management Plan?

❑ understand the Plan, including with the following:

    ❑ application of the Plan to them?

    ❑ assessment of training needs?

    ❑ communication, training and induction procedures?

    ❑ training programs?

Enhancements for major contracts

Does the Environmental Management Plan include the following, as they apply to the nature and scope of the contract:

❑ Identification of organisational and individual roles, responsibilities and authorities for establishing, implementing and maintaining procedures, and monitoring activities and performance, to ensure conformity with each environmental management requirement (documenting all such responsibilities)?
With:

   ❑ supervisory/management protocols for personnel and service providers?

   ❑ appointment of an environmental manager?

❑ Documented procedures, with roles, responsibilities and authorities, for controlling all activities/processes and performance to ensure conformity with each environmental management requirement (listing all such requirements)? Including for:

   ❑ management of service providers?

   ❑ training of personnel?

   ❑ communicating requirements, including legislation/regulations, and approval/permit/licence and contract conditions?

   ❑ keeping records?

   ❑ providing regular reports on the implementation of the Environmental Management Plan?

   ❑ activities with compliance bonds/undertakings and penalties for nonconformity?

   ❑ Other activities? (give details) ....

❑ Cross-references to, or inclusion of, other environmental and other management related documents such as:

   ❑ work method statements? (give details) ....

   ❑ design plan?

   ❑ landscape plan?

   ❑ soil and water management plan/erosion control plan?

   ❑ statement of heritage significance?

   ❑ incident management plan?

   ❑ traffic management plan?

   ❑ communications plan?

   ❑ industrial relations/training plan?

   ❑ OHS management plan?

   ❑ quality management plan?

   ❑ Others? (give details) ....

❑ Monitoring, measurement, evaluation and review (including audit) procedures, including provisions for:

- ❑ review criteria/measures/scope/personnel/program?
- ❑ addressing the consequences of nonconformities?
- ❑ investigation, analysis, evaluation and follow-up verification?
- ❑ corrective and preventive action?
- ❑ Others? (give details) ....

APPENDIX C - RELEVANT ENVIRONMENTAL LEGISLATION

Legal compliance

To ensure legal compliance, organisations must identify and understand the regulatory requirements applicable to their activities, products and services, and manage these accordingly. An Environmental Management System would include procedures for ensuring the identification and understanding of legal compliance requirements is kept up to date.

A comprehensive website database of NSW law records is provided by the NSW Parliamementary Counsel. The database is available at: http://www.legislation.nsw.gov.au

The Environmental Defenders' Office (EDO) Environmental Law Fact Sheets are a source of basic guidance on environmental law, and are available at: http://www.edo.org.au/edonsw/site/factsheets.php

The Fact Sheets are a guide only and are not a substitute for the specific legal advice needed regarding any particular issue.

Laws, regulations, approvals, permits and licences

The following information is also provided as a guide only. Appropriate professional advice should be obtained to suit particular circumstances and projects.

Building and other approvals from councils

Under the *Local Government Act* certain approvals may need to be obtained from a council for such activities as:

- installing temporary structures on land;
- certain activities on community land; and
- carrying out sewerage works.

Pollution licences and approvals

Licences and approvals may be needed from the Department of Environment, Climate Change and Water under the *Protection of the Environment Operations Act* for: -

Water

- discharge to any waters.
- installing or modifying equipment for waste treatment discharge.

Air

- emissions on scheduled premises.
- emissions from, and use of, plant consuming more than 300kg fuel/hour.

Noise

- conditions of operation with noise on scheduled premises.

Heritage and aboriginal heritage

Approval is needed from the Heritage Council under the *Heritage Act* to demolish, damage, remove or alter any heritage item. There are also restrictions that may be placed on works that expose relics without consent.

With aboriginal relics and places, a licence is needed from the National Parks and Wildlife Service (NPWS) to damage, deface or remove any relics or places on the site of any construction work. Under the *National Parks and Wildlife Act* there is a duty to notify the NPWS of the discovery of any such relics and places.

Flora, fauna and vegetation protection and weed control

Several Acts address the protection of vegetation and flora, and the related fauna habitats and soil.

Protected land

Under the *Native Vegetation Act* development consent is required from the Minister for Land and Water Conservation to clear native vegetation and State Protected Land. Exclusions may apply if the land is subject to a Regional Vegetation Management Plan.

State Protected Land is determined by the Minister as land that:

- has a slope of 18 degrees or more;
- is within 20 metres of the bed or bank of any river or lake; or
- is environmentally sensitive.

Habitat of threatened species (flora & fauna)

If any works, including clearing are:

- likely to significantly affect threatened species, populations or ecological communities or their habitats;
- likely to harm or result in the picking of threatened flora species, populations or ecological communities;
- on land that is mapped as critical habitat; or
- likely to damage a critical habitat of a threatened species, population or ecological community.

A NPWS approval of a Species Impact Statement is required prior to planning/development consent or approval being given under the relevant planning legislation.

Habitat of threatened species (fish and marine vegetation)

Under the *Fisheries Management Act*, NSW Fisheries approval is required if any activity is likely to significantly affect threatened species, populations or ecological communities, or is in an area mapped as a critical habitat.

Protected plants

Native plants are protected under the *National Parks and Wildlife Act*. A licence is needed from the NPWS to pick certain plants.

Mangroves, sea grasses and other marine vegetation

A permit is needed from the NSW Fisheries to cut, remove, damage or destroy mangroves, sea grasses and other marine vegetation on public water or land, agricultural leases or foreshores. These are valuable habitats protected under the *Fisheries Management Act*.

Noxious weeds

Noxious weeds must be controlled and destroyed under the *Noxious Weeds Act*.

Other work on or near waterways

Apart from controls on State protected land under the *Native Vegetation Act* and controls on vegetation removal under the *Fisheries Management Act*, other requirements apply specifically to construction in or near waterways.

Rivers and foreshores improvements

Permits are likely to be needed to:

- excavate or remove material within 40m of protected waters;
- reclaim or till land;
- design, realign or divert a channel; and
- cause any change to a riverbed or bank.

A permit is not required by a public authority/agency to carry out the above activities.

Dredging and reclamation

Under the *Fisheries Management Act* the Minister for Fisheries must be informed of any proposal to dredge or reclaim in any waters.

Protection of fish passage

A number of notifications in writing must be made to the Minister for Fisheries by public authorities/agencies (so relieving them of the need to obtain a permit) in the following circumstances:

- before carrying out or authorising dredging or reclamation work (such as a service provider's contract work) in any waters; and
- before acting to construct, alter or modify a dam, weir or reservoir (so as to include a suitable fishway design, including to alter an existing fishway).

In addition, it is an offence to create and obstruction across a bay, inlet or river so that fish are or will be or could be left stranded.

Unhealthy or contaminated land

The *Contaminated Land Management Act* imposes a duty to report contamination to the Department of Environment, Climate Change and Water in the following cases:

- the first duty is on any person who becomes aware that their activities in, on or under land (where land includes water on or below the land surface and the bed of such water) have caused contamination; and
- the second duty is on a landowner who has become aware that the land has been contaminated (whether before or during the owner's ownership of the land).

Storage, transport and disposal of substances and wastes

Apart from requirements under the *Local Government Act* and pollution control laws, several other Acts aim to reduce harm to human health and the environment from dangerous substances.

Environmentally hazardous chemicals

Under the *Environmentally Hazardous Chemicals Act*, a licence, from the Department of Environment, Climate Change and Water, and safeguards are needed for the storage, transport and disposal of certain chemicals such as chlorine, pickle liquor and the like.

Dangerous goods

Under the *Dangerous Goods (Road and Rail Transport) Act*, licences are required from WorkCover NSW for the storage and transport of dangerous goods and the transport of explosives. Under the Act, WorkCover NSW administers on-premises provisions relating to dangerous goods, such as the packaging, loading/ unloading of vehicles and classification of dangerous goods; and the Department of Environment, Climate

Change and Water licenses and administers the on-road provisions for the transport of dangerous goods.

Waste disposal

Under the *Protection of the Environment Operations Act*, a licence may be needed to operate a waste facility, to transport certain types of waste or when certain hazardous wastes are generated, from the relevant authority, the Department of Environment, Climate Change and Water.

Incident reports

There is a duty under the *Protection of the Environment Operations Act* to notify a the Department of Environment, Climate Change and Water of incidents that harm or threaten to harm the environment/ecosystems, property or persons.