



# 2013/2014

## standard specification for environmental management

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This document specifies the general standards of Environmental controls and workmanship required by the Department of Construction and Infrastructure for environmental management and landscape



## ABOUT THIS SPECIFICATION

This document was prepared by the Department of Infrastructure (DoI), and specifies the general requirement for Environmental Management.

All DoI activities and services are to comply with current legislation. DoI's Quality, Safety and Environmental Policy outlines DoI's commitment to undertaking all of its activities in an environmentally responsible manner and effectively managing risks that may lead to an impact on the environment.

DoI seeks to be recognised as the expert in government infrastructure programming, procurement and construction.

Environmental management is an integral part of providing a high level of service delivery, continual improvement of processes, and quality project outcomes.

This is the first edition of the Environmental Management Specification.



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Chief Engineer

15 November 2013

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First edition: 2014

# Standard Specification for Environmental Management First edition

## REFERENCE TEXT

**REFERENCE:** Read this Standard Specification in conjunction with the Project Specific Requirements and Drawings, if any. Only those parts of the Standard Specification which refer to the works being carried out apply. This document may be used as a blanket reference specification referring generally to the standards of materials and workmanship required by DoI for all projects.

**PROJECT SPECIFIC REQUIREMENTS:**

The selection of specific items or materials for the works being carried out are specified in the Project Specific Requirements or shown as notes on the drawings.

OR

There are no separate Project Specific Requirements. For specific items or materials for the works being carried out, refer to the drawings or scope of work if any.

**PRECEDENCE:** Any provision in the project specification or on the project drawings shall override any conflicting provision in this Standard Specification.

**HOLD AND WITNESS POINTS:** These apply whether quality assurance is included in this project or not. Refer to the definitions of hold points and witness points in the General Requirements section of the Request for Tender document.

**SITE COPY:** Retain a copy of this document on site for the duration of the works.

**ELECTRONIC COPY:** Available through Specification Services website:  
<http://www.nt.gov.au/infrastructure/techspecs/index.shtml>

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ISSN 2202-7106



# STANDARD SPECIFICATION FOR ENVIRONMENTAL MANAGEMENT

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## 1 GENERAL

This specification specifies the requirements for the environmental management of projects, including general environmental controls, Environmental Management Plans and any sub-plans, if required, heritage and cultural approvals, materials extraction approvals as well as site specific requirements such as soil erosion and weed management.

This specification is supported by a series of technical guide notes available on the DoI website (<http://www.nt.gov.au/infrastructure/techspecs/index.shtml>) that provide further information and specific guidance on subjects addressed below.

## 2 RESPONSIBILITY

Comply with the provisions of this specification and any other environmental protection provisions in the Contract and that the requirements of any applicable statute by-law, standard etc. related to environmental protection are observed.

The environmental protection requirements in this Specification, together with the Conditions of Contract, are complementary to, and not in substitution for, any statutory requirements or any of the technical requirements of the Specifications and Drawings. The accuracy of these legal obligations including all approvals licences and all ancillary documentation is the responsibility of the contractor to check for relevance and currency.

Comply with all relevant environmental statutory requirements and procedures defined within the Contractor's Environmental Management Plan and all supplementary plans.

## 3 DEFINITIONS

Refer to DEFINITIONS AND ACRONYMS. References to Acts include any amendments to Acts together with a reference to Regulations and instruments made under them.

**RFT-** Request For Tender: provisions applicants to RFT's are equally applicable to RFQs

**RFQ-** Request For Quotation: see RFT

**RND-** Road Network Division

**PSRs-** Project Specific Requirements

## 4 STATUTORY REQUIREMENTS

### GENERAL

Comply with the following as applicable;

- Northern Territory Aboriginal Sacred Sites Act
- Bushfires Act
- Dangerous Goods Act
- Environmental Assessment Act
- Environment Protection and Biodiversity Conservation Act (EPBC)
- Environmental Offences and Penalties Act
- Heritage Act
- Soil Conservation and Land Utilisation Act

- Territory Parks and Wildlife Conservation Act (TPWC Act)
- Waste Management and Pollution Control Act (WMPC Act)
- Water Act
- Weeds Management Act

Comply with the following where applicable:

- Australian Standards
- Other International Standards where Australia does not have a relevant Standard.
- Codes of Practice
- NT Government Publications
- Australian and New Zealand Environmental and Conservation Council Publications (ANZECC)
- DoI Guide Notes

## 5 APPROVALS LICENCES AND PERMITS

Ascertain which approvals, licenses and permits are required and obtain and comply with the approvals, licences and permits required to conduct works for the duration of the contract.

### 5.1 APPROVALS FOR EXTRACTION AREAS

Prior to commencing any work on or in extraction areas, either new or existing, provide documented evidence to the Superintendent that the appropriate approvals have been ascertained or obtained.

The types of approvals include those from:

- Aboriginal Areas Protection Authority (AAPA)
- NT Environment Protection Authority
- Heritage Branch- (Department of Lands, Planning and the Environment)
- Relevant Land Councils.
- Land owner (freehold) or lease of any land affected.
- Service Authorities.
- Any other approvals required.

Creation or use of existing extraction areas for fill or gravel within the road reserve not supplied by DoI require the written approval from the Superintendent before use. Use of extraction areas will be allowed provided that all requirements listed in this section are obtained and that the requirements listed in EXTRACTION AREAS clause in the MISCELLANEOUS PROVISIONS section are complied with.

### 5.2 CAMP SITE/COMPOUND/WORKSHOP – HOLD POINT

**Hold Point** - Obtain written permission from the owner or lessee of the land.

Pay all costs associated with the use of the site(s). Refer to the Department of Health-Environment Health Fact Sheet No.700 for camp site requirements for Mining and Construction Projects

[http://www.health.nt.gov.au/Environmental\\_Health/Health\\_Risk\\_Assessment/index.aspx](http://www.health.nt.gov.au/Environmental_Health/Health_Risk_Assessment/index.aspx)

Maintain all facilities in good condition.

On completion of the works remove all facilities, unless otherwise agreed in writing with owner or lessee of land, and restore the site to a clean and tidy condition.

Assume all responsibility for any current and consequential damage caused to the site as a result of occupation.

Refer to ENVIRONMENTAL LEGISLATION, REGULATIONS AND STANDARDS in the REFERENCED section.

## 6 SITE CONTROL

Do not form any new tracks, alter any existing tracks, erect any camps, remove any trees or shrubs, cut any fences or water, sewer, power or telecommunications lines or perform other activities not specified or indicated on the drawings or otherwise required under the Contract without the prior written approval of the Superintendent.

Written approval from the Superintendent is required for the establishment and use of any detours, turnarounds or equipment lay down areas. These areas should be located in existing cleared areas where ever possible.

### 6.1 SITE FACILITIES

Demonstrate environmental best practice in locating and managing site facilities to minimise impacts on the environment and the community.

### 6.2 STAGING OF WORKS

All works are to be staged appropriately in order to minimise potential risks and impacts to the environment. Staging of the works must be addressed in the project timeline.

All works within waterways/drainage lines are to be completed and the site stabilised prior to the start of the wet season (October). If this is not possible appropriate controls to manage environmental impacts are required to be established by 30 September.

## 7 SOIL EROSION MANAGEMENT

Control erosion in accordance with best practices standards such as International Erosion Control Association (IECA) Australia Best Practice Erosion and Sediment Control (<http://www.austieca.com.au>) and the DoI guidelines throughout the duration of works or until the site has been effectively stabilised.

### 7.1 PERFORMANCE REQUIREMENTS

Take effective precautions to prevent erosion of soil from all lands used or occupied by the Contractor.

Erosion and sediment control measures must comply with the following requirements:

- Early installation of all drainage erosion and sediment control measures.
- Control measures are to be in place prior to 30 September or at the commencement of works if works are to occur between 30 September to 31

March, with exception of controls that need to be in place year round regardless of the time of year.

- All erosion and sediment control measures are to be installed and maintained in good working order.
- Any runoff from the site must comply with the requirements of the Department of Land Resource Management (DLRM) Guidelines and relevant legislation.
- There is to be no erosion resulting from construction practices.

NOTE: The DoI Environmental team is available to provide advice regarding design and application of control measures to suit the proposed works and local environment.

## 7.2 SITE INSPECTIONS AND MONITORING

Contractor daily site inspections shall consist of visual assessment of erosion and sediment control structures to verify their condition and effectiveness. Records of inspections are to be kept and made available upon request.

## 7.3 MAINTENANCE

Continually inspect and maintain control measures throughout the duration of works and particularly following each incidence of rain.

Rearrange and reposition control measures as required to maintain their efficiency.

Handle and dispose of sediment collected by control measures in a manner approved by the Superintendent.

## 7.4 REMOVAL

Remove all temporary control measures following rehabilitation or when otherwise no longer required.

## 8 STOCKPILE MANAGEMENT

Install all necessary erosion and sediment control measures to effectively manage sediment laden runoff or wind erosion from stockpile areas.

Do not place stockpiled materials inside vegetation protection areas or within 10 metres of retained trees or within the drip line of any trees. Comply with Australian Standard AS 4970 Protection of trees on development sites.

Do not place stockpiles within 50 metres of any drains, drainage lines, creeks or other waterways.

Locate the stockpiles so that any slump of the stockpile would not affect erosion and sediment control measures or infringe upon specified minimum clearance requirements.

Top soil stockpiles are not to be more than 1.5 metres in height. All other stockpiles are not to be more than 3 metres in height.

Topsoil that is not contaminated by noxious weeds must be stockpiled for later spreading on batters and other disturbed areas. Other material may also be stockpiled but separated from the topsoil stockpiles.

Stockpiles in residential areas or adjacent to sensitive receivers are not to exceed 2 metres in height.

Maintain the stockpiles to prevent the growth of weeds on the stockpiles.

## 9 WATER QUALITY

Comply with all relevant legislative requirements and requirements of local water authorities and all other relevant laws and by-laws in force in the Northern Territory.

Provide controls, including soil erosion and sediment controls, to ensure that all water leaving the site complies with any water quality criteria nominated by Department of Land Resource Management (DLRM) or specified under the PROJECT SPECIFIC REQUIREMENTS in the RFT/RFQ

### 9.1 SURFACE WATER MANAGEMENT

The natural channel geometry and meander form of perennial and non-perennial streams must not be altered, nor riparian vegetation disturbed except where written approval is given by the Superintendent.

Temporary hydraulic structures such as open channels, drainage lines, batter chutes, release points into streams, and vehicle crossings, are to be designed to carry flows and remain stable, without causing erosion damage, in at least the 5-year Average Recurrence Interval (ARI) event of critical duration.

Flow in channels and drainage lines must be managed to non-erosive velocities, or channels lined with suitable protective material as necessary to prevent scouring.

Works in waterways and stormwater drainage lines are to be timed to minimise the potential for exposure to rain or flood events, have minimal disruption with disturbed areas and be rehabilitated within 10 days following completion of works in these areas.

## 10 WATER EXTRACTION

The water extraction procedures must include regular testing of the source if water from a sewerage treatment works or another source other than a town water supply or natural water source is to be used. Testing must ensure that the water is suitable for the purpose and is not hazardous to health and the environment.

### 10.1 WATER EXTRACTION LICENCE

Obtain a Water Extraction Licence under the *Water Act* to extract water for all works other than road works.

The Northern Territory Administrator has signed an exemption to Section 45 of the *Water Act* for water extraction for works on public roads. This effectively exempts DoI and its contractors from the requirement to obtain a water extraction licence when undertaking water extraction associated with road works on public roads.

The extraction of water must comply with the Waste Management and Pollution Control Act (*WMPC*), the *Water Act* and the Guidelines for Water Extraction as they relate to Road Maintenance.

## 10.2 WATER EXTRACTION APPROVAL

NOTE: Although a licence to extract water for Road Maintenance is not required, approvals to use or extract from a body of water is still required by the appropriate regulatory authority.

Apply to the relevant authority for approval to use and draw water from any surface or subsurface body. Generally this is either Water Resource Branch – Department of Land Resource Management (DLRM) <http://www.lrm.nt.gov.au/water/permits> or Power And Water Corporation (PWC) (allow up to 3 weeks for this process). Provide evidence to the Superintendent of the approval to draw water issued by the appropriate authority prior to commencement of water extraction activities.

Resources are available to assist the contractor in locating suitable locations to extract water. E.g., DoI or the Department of Land Resource Management internet page for bore locations. These services should be used, where possible, to find appropriate bores to service works

Where underground water sources are unavailable, surface water may be used provided the following conditions are adhered to:

- Notify Department of Land Resource Management ([Pumpagereport.@nt.gov.au](mailto:Pumpagereport.@nt.gov.au)) by phone, email or fax of the location, expected water use and how it will be extracted for each and every occasion. This must be done prior to extracting any water. This information is to be forwarded to the Superintendent.
- For all water bodies, ensure that any water extraction will not reduce the supply utilised by local landholders and the environment, to the point where such users are adversely affected. The general guideline is that only 20% of any flow in a river or 20% of any standing water body should be used.
- Where a standing water body is less than 500mm deep or extraction from the water body (river or waterhole) is likely to exceed 20% as detailed above, source an alternative water supply. Should alternative water supply not be available contact Department of Land Resource Management for advice and guidance.
- Protect the banks and beds of any waterhole or river used for water extraction. Any inadvertent damage is to be fixed immediately and pads and tracks likely to contribute to erosion rehabilitated as part of the contract. This would include soaks used from seasonally dry river beds.
- No fuels, lubricants or equipment, other than pumping equipment are permitted to enter or remain at the water body.

## 11 CONSTRUCTION SITE DEWATERING

Dewatering includes any activity that involves the removal of ponded stormwater or infiltrated groundwater from any location on site and the subsequent reuse or discharge of that water.

Conduct all dewatering activities in a manner that does not pollute the environment.

Written approval from the Superintendent is required before the commencement of any dewatering activities.

Water quality is to be adequately and continuously protected through all phases of development/construction of the project. Water discharged from the site is to be of a standard to ensure no detrimental impacts on water quality and the environment occur during the construction phase. An increase in suspended solids within surface waters discharged from a work site is not to exceed a 10% increase from upstream to downstream of the site (where water quality up stream of the site has not been impacted on by other soil disturbing activities).

## 12 VEGETATION MANAGEMENT

Do not destroy, remove or clear vegetation to an extent greater than is necessary for the execution of works.

Minimise environmental risks by following vegetation management strategies such as:

- Excluding access to significant vegetation areas
- Selecting appropriately sized clearing machinery and equipment
- Minimising worksite area
- Protecting vegetation driplines
- Locating ancillary activities (e.g. stockpile sites, camps, parking locations, vehicle hardstands) within existing disturbed areas

Should a threatened species be identified onsite, in addition to those identified in the relevant approval such as the Risk Assessment (RA), Notice Of Intent (NOI), Environmental Impact Statement (EIS), Public Environment Review (PER) or other DoI gained approval stop works in the immediate area, notify the Principal and the Superintendent, and install a temporary protective barrier to protect the species.

### 12.1 SITE CLEARING

Prior to clearing any area it is to be demarcated with fencing, flagging tape, spray paint or other method approved in writing by the Superintendent. Ensure the demolition indicators (tapes, spray paint or other) do not go outside of the clearing limits shown on the drawings OR the clearing limits approved in writing by the Superintendent. Contain the extent of site clearing to the limits specified or indicated on the drawings or otherwise approved in writing by the Superintendent. Ensure that all site personnel observe the limits of clearing and are made aware of the importance of any vegetation of significant value. Should works or disturbance be proposed in areas outside the previously approved works boundaries, permission must be obtained in writing from the Superintendent. Justify the need to enter any areas outside of the previously approved site boundaries and detail the works within the plans.

If any areas of vegetation within the limits of clearing are to be retained, fence off with temporary fencing. Clearing should be staged so that land disturbance is confined to minimum areas of manageable size, thereby limiting the extent and duration of exposure. Control measures should be applied progressively as each stage is cleared.

All areas to be cleared or used as turnaround or laydown areas should be identified on clearing plans, provided to the personnel undertaking the clearing works, and flagged on the ground prior to any clearing activities commencing.

Methods and timing of clearing should be implemented in a manner that minimise the potential for erosion to occur. All machinery operators should be trained in best practises for clearing to minimise erosion.

Cleared vegetation, excluding weeds, may be reused on site for rehabilitation of disturbed areas such as, extraction areas, vehicle turn around areas etc.

Where applicable, cleared vegetation can also be mulched on site and re-used on site where appropriate as ground cover or environmental control measures, if suitable.

Remove excess or unwanted material from the site and dispose in accordance with local authority requirements and guidelines.

### 12.2 WEED MANAGEMENT

Control or eradicate weeds within the site in accordance with the *Weeds Management Act*. Ensure that no declared weeds are spread or introduced within the site for the duration of the works.

When weeds are present on the site, consult with Local Council and Department of Land Resource Management (DLRM), and be guided by, best practice removal and control techniques and any management procedures that may have been developed for particular noxious and declared weeds. The reuse of weed contaminated topsoil by surface spreading is not permitted. Where necessary, horticultural advice must be sought to determine whether the type and/or proportion of weed cover is significant for the topsoil to be deemed weed contaminated.

The use of hay bales on site can only occur if documentary evidence is provided demonstrating that the hay bales are certified weed free and written approval is received from the Superintendent. In general, the use of hay bales for environmental control is not supported.

### 12.3 CLEANING OF VEHICLES AND PLANT

Ensure that vehicles and plant are steam cleaned or high pressure water cleaned removing all earth/soil to prevent the spread of weeds and pest animals before entering site. Cleaning process will be enforced in high risk sites with weed infestations or of high ecological significance such as national parks. Cleaning is not mandatory for weed free areas but it



is encouraged for best practice. Provide evidence that the area is weed free. This also applies to transport to site of organic matter.

Provide the Superintendent with a signed statement certifying that cleaning took place. Include the following information:

- Vehicle or Plant Identification Number
- Method of Cleaning
- The time and date carried out
- The location of cleaning operations
- The name of the cleaning operator

Collect and dispose of the removed earth and organic material by a method that will ensure that it does not infest any river, stream, wetland or property.

If declared weeds are present within the work area steam clean or high pressure water clean all vehicles and mechanical plant of earth and organic matter before leaving the designated infested area and/or transportation of them from the site.

#### **12.4 PRUNING OF AMENITY TREES**

Carry out tree pruning operations in accordance with Australian Standard AS 4373. Include at least one qualified arborist in each tree pruning team.

Tree lopping or heavy pruning practices are not acceptable, except on the written recommendation of a qualified arborist. Written approval from the Superintendent is required.

Tree removal operations do not require a qualified arborist to be included in the work team.

#### **12.5 LIGHTING OF FIRES**

The lighting of fires for clearing of vegetation or disposal of rubbish is not permitted under any circumstances.

Where fires are accidentally started extinguish the fires immediately if appropriate and safe to do so. Control of campfires are strictly contractor's responsibility. Fires are not permitted during times of fire bans.

### **13 FAUNA MANAGEMENT**

All native wildlife must be protected.

All trees to be removed are to be inspected to establish whether nesting native fauna are present. If present, disturbance should only proceed after approval from the Superintendent.

NOTE: Advice will be sought from Department of Land Resource Management (DLRM) if nesting fauna are sighted. Ensure sufficient time is available to allow any required specialist to make a determination and give advice to the Superintendent.

Should a threatened species be identified onsite, stop works in the immediate area, notify the Superintendent, and install temporary protective barriers to protect the species.

### **13.1 PEST ANIMAL MANAGEMENT**

Ensure that all necessary measures are undertaken to prevent and minimise the risk of the introduction and spread of pest animals. No domestic pets, including dogs, are to be brought to the construction site by construction personnel without written approval from the Superintendent. If approved, pets must be under control and safely secured at all times. Provide evidence that pets will be under control and safely secured at all times.

### **14 AIR QUALITY**

Construction facilities are to be designed and operated to minimise the emission of smoke, dust, pesticides and other substances into the atmosphere. Comply with the requirements of the WMPC Act and any conditions of licences, notifications, approvals or permits in relation to maximum air pollutant levels.

Where monitoring is required, the monitoring must comply with the DLRM air quality guidelines.

Employ construction methods that will keep the air pollution to a minimum. Apply appropriate measures to ensure that airborne pollutants from all activities do not cause undue disruption or inconvenience in the vicinity of the Site.

The following measures, where applicable, are to be conducted to minimise this risk to the environment:

- Spraying of earthwork formations and roads with water or other suitable liquids approved by the Superintendent.
- Removal of mud from the wheels and bodies of haulage equipment before it enters public roads or other sealed pavements.
- Quick removal of mud spilt or deposited by the transport of materials on to public roads or other sealed pavements.
- Establishment of suitable cover crop or provision of other covering over topsoil stockpiles.
- Erection of dust screens around and/or spraying of stockpiles with suitable stabilising agents.
- Stopping dust generating activities which cannot be adequately controlled by water or other means.
- Transportation of materials which are suitably covered and loaded in a manner that will prevent dropping of materials.
- Maintaining dust control equipment so that this equipment is available when required, including periods of dust generating activities or high wind speed.
- Maintaining exhaust systems of construction plant, vehicles and machinery in accordance with manufacturer's specifications and undertaking periodic visual checks of exhaust systems' emissions.

- Treating topsoil stripped areas with no scheduled activities within two weeks to prevent dust generation.

## 15 CONTAMINATION MANAGEMENT

Comply with the WMPC Act in relation to disturbance or treatment of potentially contaminated land.

Immediately implement any control measures needed to divert surface runoff away from contaminated land and to capture and manage any surface runoff contaminated by exposure to contaminated land.

### 15.1 CHEMICALS, DANGEROUS GOODS AND OTHER POTENTIAL CONTAMINANTS

Plan and execute all works so as to minimise the possibility of pollution of the Site and adjoining areas from chemicals, dangerous goods and other potential contaminants.

Use, store and handle chemicals and dangerous goods in accordance with all relevant legislation, manufacturer's instructions and the relevant Safety Data Sheets (SDS). Employ transporting, handling, storage and application methods that will prevent chemical, fuel and lubricant spillage on the site and adjoining areas. Do not pollute or permit pollution of land or waterways by a chemical, fuel or lubricant, or any waste material or imported fill.

### 15.2 SPILLAGE PREVENTION AND CONTAINMENT

Do not locate storage areas within 50 metres of natural or built drainage lines, flood prone areas, or on slopes steeper than 1:10.

Do not leave refuelling operations unattended.

Do not refuel or maintain plant and equipment, mix cutting oil with bitumen, or carry out any other activity which may result in the spillage of a chemical, fuel or lubricant on any location with direct drainage to a waterway or environmentally sensitive areas without appropriate temporary bunding.

Before discharging any water from bunded areas, verify that the water complies with any applicable legislation or water quality criteria nominated by the EPA and/or DLRM. Arrange appropriate treatment if the water quality is not suitable for discharge.

Spill clean-up equipment and materials, appropriate for the type and quantities of chemicals used on site, must be kept on site at all times during the works and in a readily accessible location.

The equipment and materials for spill clean-up and containment must be maintained and replenished as needed.

All site personnel must be trained in the use of spill clean-up equipment, and containment of materials, including appropriate storage of chemicals if materials must be on site whilst any works are conducted on site. All site personnel must be aware of the location of spill kits on sites.

Clean up all chemical spills immediately. This may require the excavation of contaminated soil and

appropriate remediation or disposal at waste disposal facility. If spills result in an environmental incident, ensure that the incident is reported in accordance with reporting procedures and legislative requirements.

Do not dispose of liquid paint materials or other hazardous materials by flushing down any sewer, stormwater system or natural waterway.

Keep records of all water quality checks, discharges and any remedial actions.

Report all chemical spills to the Superintendent. Where appropriate, also report spills to the NT Pollution Hotline, phone 1800 064 567.

## 16 WASTE MANAGEMENT

Comply with the requirements of the WMPC Act.

Remove from the site and dispose of all waste materials, including green waste, food scraps and other putrescible wastes, construction waste, chemicals and effluent in an appropriate manner, in approved legal waste disposal sites or facilities.

Recycle waste materials where appropriate.

### Waste Management Register

Refer to PROJECT SPECIFIC REQUIREMENTS section of the RFT/RFQ.

Maintain a Waste Management Register for the duration of the Contract, to record the types, amounts and locations of waste reused, recycled, stockpiled and / or disposed of. The Waste Management Register must include the following details:

- Type of waste and its classification (according to the WMPC Act and DLRM Waste Classification Guidelines) (Schedule 2 of the Waste Management and Pollution Control Regulations)
- Tonnes of waste
- How and where the waste was reused, recycled, stockpiled or disposed of
- Date when the waste was reused, recycled, stockpiled or disposed of
- Name of the transporter used ( Person or Business name)
- Be able to produce receipt of commercial disposal if requested

### 16.1 MATERIALS WITH RECYCLED CONTENT

Implement measures to reduce, re-use and recycle waste products/materials including soil, road pavement materials, concrete, oils and vegetation.

Demonstrate the priority use of materials and products that maximise the use of recycled content wherever these are cost and performance competitive, and are at least the environmental equivalent of the non-recycled alternative. Assess the cost competitiveness of a product or material on a project lifecycle basis, considering issues such as

impacts on construction practices, future maintenance and disposal requirements.

## 16.2 HAZARDOUS WASTE AND MATERIALS

There is the potential, within a variety of workplaces, for persons to be exposed to Hazardous Waste Materials and Viruses. Exposure to these hazards can be managed by following the principles of a three-step risk management process:

1. Hazard identification;
2. Risk assessment, and
3. Risk control.

Notify the Superintendent of any occurrence of any persons having been exposed to hazardous waste.

## 16.3 EFFLUENT DISPOSAL

Ensure that all effluent from amenities is discharged into an approved facility or, if permitted by the controlling authority, the local sewerage system.

Septic tanks and portable self-contained toilets of suitable capacity may be used subject to suitable arrangements for the disposal of effluent.

Where the use of septic tanks or portable toilets is not reasonable or practical, pit toilets may be used, but this requires the prior written approval of the Superintendent. Any pit toilets constructed must be at least 100m from any bore, at least 200m from any watercourse and sites appropriately rehabilitated on completion.

## 16.4 ILLEGAL DUMPING

Illegal dumping is not permitted.

Do not litter, dump or dispose of unwanted waste or dispose of surplus construction materials including bitumen, asphalt or concrete or permit such activities, on any land on or around the site.

## 16.5 NOTIFICATION OF THE TRANSPORTING AND DEPOSITING OF WASTE

Written approval from the Superintendent is required prior to transporting wastes generated by or for the Principal to an area that is not a licensed waste facility or a place owned by the Principal. This includes waste transported for reuse, recycling, disposal or stockpiling.

## 17 CULTURAL AND HERITAGE MANAGEMENT

### 17.1 PROTECTION OF CULTURAL AND SACRED SITES

Should any item be encountered which might be an artefact of heritage value or any relic, artefact or material which might be of Aboriginal origin, cease all construction work that might affect the item and protect the item from damage or disturbance. Notify the Superintendent immediately, who will then arrange for appropriate specialists and community representatives to inspect the site.

Ensure that all personnel working on site have received training regarding their responsibilities regarding cultural heritage and are made aware of

any sites/areas which must be avoided or protected including Sacred Sites identified on the Aboriginal Areas Protection Authority Certificates.

Sites or areas which must be avoided or protected during works must be identified on a site map. The map must be made available to all relevant personnel during the works.

The protection of sites may require the installation of temporary protection fencing and maintenance of the fencing.

### 17.2 SACRED SITES PROTECTION

The Principal has obtained or will obtain Aboriginal Areas Protection Authority (AAPA) Certificates under the *Northern Territory Aboriginal Sacred Sites Act* (NTASS Act). These certificates provide the Principal and the Contractor, including all sub-contractors, with indemnity from prosecution under the NTASS Act as long as the following are adhered to:

- All works are confined to the 'subject' land identified on the certificate
- All activities conducted by the Contractor are covered in the 'Purpose of Use' on the certificate
- All conditions on the certificate are adhered to.
- All contractors, employees and sub-contractors are aware of the conditions of the certificate.

If the Contractor elects to work outside the areas covered by the certificate provided it is the responsibility of the Contractor to apply and obtain an AAPA Certificate under the NTASS Act.

### 17.3 BREACH OF THE NT ABORIGINAL SACRED SITES ACT OR HERITAGE ACT

If AAPA, Land Council, or Department of Lands, Planning and Environment (DLPE) notifies the Superintendent that a Certificate condition or any other condition applying to the protection of a sacred site or cultural heritage site has allegedly been breached, the Superintendent will instruct the Contractor to stop work in the near vicinity of the affected site.

The Superintendent will arrange for a meeting with the necessary parties that could include custodians, the Contractor, AAPA and/or the Heritage Branch to be held for the following purposes:

- To view the affected site
- To discuss when work might resume in the vicinity of the sacred site or heritage site
- Agree to any restorative measures that may be needed

Works cannot recommence in the affected area until notification is given by the Superintendent pending the relevant assessment.

If restorative measures are required the Superintendent will document the requirements and issue a letter to all parties specifying the restorative measures which are to be implemented together with a timetable for implementation. All parties are to

respond to the letter to confirm agreement, then the Superintendent will give instructions on the restorative measures which are to be implemented.

Meet the reasonable costs of:

- AAPA representatives and the custodians to attend the site meeting in accordance with Clause 19G of the NTASS Act and Regulations
- Any restorative measures agreed upon between AAPA and the custodians, or Heritage Branch
- Any costs of the Principal

AAPA will independently investigate whether a prosecution should also be pursued under the NTASS Act.

## **18 COMMUNITY LIAISON**

### **18.1 NOTIFY RESIDENTS**

Notify local residents and businesses, including Aboriginal communities, about new or changed construction activities which will affect access to their properties or otherwise significantly disrupt residents or occupiers use of their premises.

Unless the work is of an urgent nature for safety reasons notification of residents must be at least 5 working days before commencing the work and must advise of the following;

- The nature of the work
- Why it is necessary
- The expected duration
- Changes to arrangements for traffic or property access
- The name and 24 hour contact telephone number of the Contractor's representative who can respond to resident concerns

The Superintendent will provide a contact point for Aboriginal communities.

### **18.2 COMPLAINTS**

Within 1 working day of receiving a complaint about any environmental issue, including pollution, supply a written report to the Superintendent detailing the complaint and action taken to alleviate the problem. Keep a register of all such complaints, together with the following records:

- Date and time of complaint
- The method by which the complaint was made (telephone, letter, meeting, etc.)
- Name, address, contact telephone number of complainant (if no such details were provided, a note to that effect)
- Details of complaint
- Action taken in response including follow up contact with the complainant
- Any monitoring to confirm that the complaint has been satisfactorily resolved
- If no action was taken, the reasons why no action was taken

### **18.3 PRESERVE VISUAL VALUES**

Maintain the visual amenity of adjacent land owners at all times during the construction. Keep the site neat and tidy at all times.

Design and erect temporary lighting, including compound security lighting, in such a way that it minimises nuisance to residents, but conforms to the safety requirements for the illumination of the site. Ensure that adjoining residents or passing traffic is not affected by glare.

## **19 NOISE CONTROL**

Take all practical precautions to minimise noise resulting from the work activities. Fit noise suppressors to all construction equipment so that noise is minimised.

Do not use loud hailers in built up areas.

Where applicable the following measures should be applied to minimise the impact of noise:

- Substitution by an alternative process
- Restricting times when noisy work is carried out
- Placement of work compounds, parking areas, equipment and material stockpile sites away from noise-sensitive locations
- Where noise barriers/walls are to be constructed, programming this as early as possible to reduce noise impacts from other construction work on neighbouring residents
- Screening or enclosures
- Consultation with affected residents

### **19.1 COMPRESSOR SILENCING**

Fit all compressor sets used in the performance of this work with effective acoustic canopies and engine exhaust silencers of a type as recommended by the compressor manufacturer.

Alternatively, compressor sets specially designed for quiet operation may be used. Keep compressor sets and canopies in effective operating condition at all times. Keep any access panels in acoustic canopies closed at all times while the sets are running.

### **19.2 JACKHAMMER SILENCING**

Fit all jackhammers used in the performance of this work with effective silencers of a type as recommended by the jackhammer manufacturer. Service and maintain all tools to manufacturers recommendations at all times.

### **19.3 GROUND VIBRATION AND AIR BLAST**

Take due care in all construction activities to prevent damage to adjacent public utilities, structures and buildings resulting from construction vibration and air blast. To protect the amenity of the occupiers of buildings, the blasting activities shall be carried out to meet appropriate standards and guidelines such as Australian Standard AS 2187.2 and ANZECC (Technical basis for guidelines to minimise



annoyance due to blasting overpressure and ground vibration) publications.

Consider measures to minimise the impact of vibration and air blast, such as:

- Substitution by an alternative process
- Restricting times when work is carried out
- Screening or enclosures

Consult with affected residents before commencing any activities likely to cause ground vibration or air blasting.

## 20 ENVIRONMENTAL MONITORING

Comply with the requirements of this ENVIRONMENTAL MANAGEMENT Specification and any other Environmental Management sections in the RFT/RFQ. Carry out continuous environmental monitoring throughout the duration of the Contract. This is in addition to other monitoring requirements detailed elsewhere.

Maintain records of the results of environmental monitoring including the effectiveness of any remedial action taken.

Records of environmental monitoring are to be made available to the Superintendent upon request.

## 21 AUDITS

Develop and implement a risk-based auditing program to verify that all works are in compliance with this Specification.

Maintain records of the results of environmental audits including non-conformances and the effectiveness of any remedial action taken.

Records of environmental audits are to be made available to the Superintendent upon request.

The Superintendent will undertake scheduled and unscheduled environmental audits.

Audits may be scheduled for every calendar month with 5 working days' notice being given to the Contractor. Unscheduled audits may be conducted with 1 working days' notice.

Scheduled audits will be conducted following the start of the works.

Provide access and co-operation and all necessary documentation to allow the audit team to conduct the audit.

## 22 NON CONFORMANCE

A failure to comply with or a breach of any condition will result in the issue of an Instruction to Contractor, or Corrective Action Request or a Non-Conformance Report or any combination of these.

Non-conformances will be recorded and be a factor taken into account in the Contractor's Performance Report rating.

## 23 PROJECT SPECIFIC REQUIREMENT

Comply with all provisions in the PROJECT SPECIFIC REQUIREMENTS (PSRs) in the Request For Tender (RFT) or on the project drawings. Any conflicts must be advised in writing to the Superintendent for clarification.

## 24 CONTRACTORS ENVIRONMENTAL MANAGEMENT PLAN

Refer to the PROJECT SPECIFIC REQUIREMENTS section of the RFT/RFQ.

A Contractors Environmental Management Plan (CEMP) is required for this contract. A template for a CEMP is available from the DoI internet page.

([http://www.nt.gov.au/infrastructure/techspecs/index\\_shtml](http://www.nt.gov.au/infrastructure/techspecs/index_shtml))

The CEMP must identify potential adverse environmental effects; cover the environmental protection practices, resources, sequence of activities required to comply with relevant environmental legislation, conditions of any applicable licence, approval and permit and all the requirements of this Specification. Appropriate environmental protection measures must be documented to keep environmental effects within compliance limits and must show the responsibility for implementation in each case.

### 24.1 SUBMISSION

Complete the Environmental Management Plan Proposal in the RFT Response Schedules and submit as part of the tender documentation.

Address all of the questions outlined in the EMP Proposal and include sufficient detail to allow assessment of the intent of the proposed EMP document.

Submit the completed Contractors Environmental Management Plan (CEMP) for the project within 7 days of the awarding of the Contract and before any work is commenced on site.

### 24.2 PRIOR TO COMMENCEMENT OF WORK - HOLD POINT

Hold Point: Prior to establishment and commencement of work on site, submit for assessment 1 copy of:

- The Contractor's Environmental Management Plan (CEMP). The CEMP must identify, address and mitigate against all environmental risks associated with the construction of the works.

Before permission to use the CEMP is given, these documents will be assessed by the Superintendent for conformance with the requirements of the Contract.

After permission to use the CEMP is given, submit 1 controlled copy of the CEMP for use by the Superintendent during the Contract.

This Hold Point will only be released after the Superintendent has been provided with the

Contractor's Environmental Management Plan that meets conditions on contract.

**24.3 DETAILS REQUIRED IN THE CEMP**

The following is a list of headings that are to be addressed in the CEMP.

- Description of the works
- Legislative Obligations
- Approvals, Licences and Permits
- Assignment of responsibility for Environmental Controls
- Assessment of potential environmental impacts and operational control measures which are to be implemented.

NOTE: As a minimum, the following are to be addressed:

- Air pollution
- Flora and fauna disturbance
- Weed management
- Soil erosion and sediment control
- Soil disturbance and vibration
- Water pollution
- Waste management
- Hazardous materials and dangerous goods
- Fuels and chemicals
- Heritage – cultural and historical
- Sacred site protection
- Noise and vibration
- Community consultation
- Environmentally sensitive areas
- Fire management

NOTE: A site diagram showing the location of no-go zones, site compound, extent of works, locations of environmental controls and any environmentally sensitive areas is required.

- Non-conformance control and corrective action procedures for all of the control measures that are to be implemented.
- Details of how the environment will be protected for each Subcontractor's activities
- Materials with recycled content
- Hours of work
- Communication procedures
- Emergency response procedures
- Environmental incident notification and reporting
- Environmental training and inductions
- Environmental monitoring
- Audit program
- Waste and recycling reporting
- Reporting requirements
- Including water extraction quantities

NOTE: DoI Environmental Services are available to provide assistance in the development of the CEMP.

**24.4 LIABILITY OF PRINCIPAL LIMITED**

Receipt of the Contractor's Environmental Management Plan will in no way relieve the Contractor of responsibility under the Contract to ensure compliance with environmental legislation and any approvals issued by other authorities as may be required in respect to work under the Contract.

**24.5 EROSION AND SEDIMENT CONTROL MANAGEMENT PLAN – HOLD POINT**

Develop an Erosion and Sediment Control Plan (ESCP) in accordance with Australian best practice guidelines such as the International Erosion Control Association (IECA) Australia Best Practice Erosion and Sediment Control (<http://www.austieca.com.au>). Hold Point - Obtain written approval from the Superintendent prior to commencement of any onsite works.

Install and maintain all measures in accordance with the approved plan.

**24.6 EROSION AND SEDIMENT CONTROL PLAN DESIGNER**

The following pre requisites must be met to enable Northern Territory Government endorsement of the Erosion and Sediment Control Plan Designer:

- Have one of the following qualifications:
  - a) Certified Professional Erosion and Sediment Control Practitioner (CPESC)
  - b) Certified Professional Soil Scientist (CPSS)
  - c) Or other suitably qualified and experienced professional, having completed an advanced specialised training course in erosion and sediment control, provided under the auspices of a reputable body such as the International Erosion Control Association, Australian Society of Soil Science, or equivalent
- Be able to give evidence of training in erosion and sediment control principles and experience in implementing and designing erosion and sediment control plans and controls on site.

The ESCP designer will monitor the performance of the ESCP throughout the duration of the contract, modifying the plan as required to meet the changing conditions and non-performance issues identified

**25 EROSION AND SEDIMENT CONTROL PLAN**

The ESCP is to supplement the Contractor's Environmental Management Plan (CEMP) Refer to the PROJECT SPECIFIC REQUIREMENTS in the RFT/RFQ

**25.1 SUBMISSION OF THE EROSION AND SEDIMENT CONTROL PLAN**

The ESCP is to be designed by a professional as described above. Include the details of the ESCP

Designer's name and qualifications and currency of any appropriate accreditations.

Design the ESCP in conformance with the requirements set out in best practice guidelines of the International Erosion Control Association (IECA) Australia Best Practice Erosion and Sediment Control (<http://www.austieca.com.au>). Produce the plan by electronic means and submit electronically to the Superintendent. Include sufficient details on the ESCP to explain the potential hazards, the assessed risks and the proposed treatments for the proposed work activities and work site which may include some or all of the details outlined below.

### 25.2 PROJECT INFORMATION

- Purpose and Scope
- Project Location
- Site Constraints/Impacts
- ESCP Objectives and Strategies
- Location of proposed stockpiles, turnarounds, temporary work areas etc
- Principal for the Works; Principal Contractor/Design Consultant including contact details
- Responsibilities including role responsibility and authority of key personnel, management hierarchy including site representatives and contact details of the responsible personnel
- Approvals or licences required to conduct ESCP works with relevant reference number

### 25.3 PLANNING

- Risk Identification and Assessment – Critical element to identify and assess foreseeable potential hazards associated with the work activities and work site
- Legal and Other Requirements – Confirmation of use of up-to-date / best practice information and legislation
- Site investigation and assessment
- Soil properties (including dispersion properties and the presence of Acid Sulphate Soils)
- Rainfall records and design parameters
- Waterways and other water sensitive environments
- Ambient water quality
- Groundwater
- Water extraction (including possibilities and limitations)
- Catchments
- Adjoining properties
- Rehabilitation
- Stabilisation and management of site during any shutdowns

### 25.4 ENVIRONMENTAL CONTROLS

- Protection of vegetation
- Vegetation clearing methodology
- Management of top soil
- Method statements for construction in or near waterways
- Management of contaminated soil
- Waste control
- Dewatering
- Waste water discharge
- Water extraction
- Plant and equipment wash down facilities
- Batch plants
- Chemical and hazardous materials storage, use and handling
- ESCP diagrams or maps showing location/s of controls / activities
- Spill response

### 25.5 IMPLEMENTATION SCHEDULE

- Project construction schedule
- ESCP implementation schedule
- Maintenance of controls (including removal and disposal of sediment)
- Removal of environmental controls
- Incident Response
- Training

### 25.6 WATER QUALITY MONITORING

- Ambient water quality
- Water quality parameters
- Sampling sites
- Frequency of monitoring
- Records
- How the data will be used to identify and resolve problems

### 25.7 MONITORING AND MEASUREMENT

- Monitoring of controls including persons responsible and corrective timeframes
- ESCP Auditing
- Record Keeping
- Public / NTG Feedback
- References

## 25.8 REVIEW PROCESS

- ESCP Review and Improvement (including changes to the construction program, scope, work methods, ineffective controls, directed by the Principal)
- Variations to Plans and Best Practice Procedures

## 26 ESCP MANAGEMENT PRINCIPLES

There are eight general principles of effective soil and water management for land disturbance associated with construction works. These principles broadly apply to the planning, design, construction and maintenance of all types of construction works including roads, buildings, barges and other projects. These can be paraphrased as:

1. Variations to Plans and Best Practice Procedures
2. Assess the implications of a project for soil loss and water quality at the planning stage
3. Plan to control erosion and sediment during the design phase and before any earthworks begin
4. Minimise the area of soil disturbed and exposed to erosion
5. Conserve topsoil for later site rehabilitation / regeneration
6. Control water flow from the top of and through the project area – divert up-slope 'clean' water away from disturbed areas and ensure concentrated flows are below erosive levels
7. Rehabilitate disturbed lands quickly
8. Maintain erosion and sediment control measures appropriately.

Some long-term erosion and sedimentation from works is inevitable given the climatic conditions of the Northern Territory. However, construction works and the subsequent operation of assets should at all times minimise the potential for erosion. The above principles provide a basis for minimising these problems with construction projects in the Territory. They also provide a framework to account for the influence of factors such as climate, topography and soil types. These principles should be adopted in any construction project and incorporated into any environmental management plan and/or erosion and sediment control plan.

There are a number of Australian publications that detail what is required for effective erosion and sediment control. The Northern Territory Government references and bases its standards on the:

International Erosion Control Association (IECA)  
Australasia Best Practice Erosion and Sediment Control. <http://www.austieca.com.au>

## 27 ENVIRONMENTAL LEGISLATION, REGULATIONS AND STANDARDS

Comply with, but do not be limited to, the following as applicable.

### Northern Territory Legislation

- *Aboriginal Land Act*
- *Bushfires Act*
- *Dangerous Goods Act*
- *Environmental Assessment Act*
- *Environmental Offences and Penalties Act*
- *Heritage Act*
- *Northern Territory Aboriginal Sacred Sites Act*
- *Soil Conservation and Land Utilisation Act*
- *Territory Parks and Wildlife Conservation Act*
- *Waste Management and Pollution Control Act*
- *Water Act*
- *Weeds Management Act*

### Northern Territory Regulations

- [Environmental Offences and Penalties Regulations](#)
- [Heritage Regulations](#)
- [Territory Parks and Wildlife Conservation By-Laws](#)
- [Territory Parks and Wildlife Conservation Regulations](#)
- [Waste Management and Pollution Control \(Administration\) Regulations](#)
- [Water Regulations](#)
- [Weeds Management Regulations](#)

### Federal Legislation

- *Aboriginal and Torres Strait Islander Act*
- *Aboriginal and Torres Strait Islander Commission Amendment Act*
- *Aboriginal and Torres Strait Islander Heritage Protection Act*
- *Aboriginal Land Rights (Northern Territory) Act*
- *Aboriginal Land Rights (Northern Territory) Amendment Act*
- *Environment Protection and Biodiversity Conservation Act*

### Federal Regulations

- Aboriginal and Torres Strait Islander Heritage Protection Regulations
- [Aboriginal Land Rights \(Northern Territory\) \(Land Description\) Regulations](#)
- Aboriginal Land Rights (Northern Territory) Regulations
- Environment Protection and Biodiversity Conservation Regulations

### Australian Standards

- AS/NZS/ISO 14001 Environmental management systems - Requirements with guidance for use
- AS 2187.2 Explosives – Storage and use – Use of explosives
- AS 1940 The storage and handling of flammable and combustible liquids

### Other Standards

- ASTM D 2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
- ASTM D 7208-6 - Standard Test Method for Determination of Temporary Ditch Check Performance in Protecting Earthen Channels from Stormwater-Induced Erosion

**ANZECC Publications**

- Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration
- ANZECC Guidelines for Fresh and Marine Water Quality

**Interstate Publications**

- International Erosion Control Association (IECA) Australasia Best Practice Erosion and Sediment Control. <http://www.austieca.com.au>
- Queensland Maroon Book for urban storm water management - Manual for Erosion & Sediment Control, Version 1.2, Sunshine Coast Regional Council
- Blue Book – Managing Urban Stormwater Soils and Construction, Volume 1, 4th edition, Volume 2a – Installation of services, Volume 2b Waste Landfills, Volume 2c Unsealed Roads, Volume 2d Main Road Construction and Volume 2e Mines and Quarries  
<http://www.landcom.nsw.gov.au/content/publication-and-programs/the-blue-book.aspx>
- Queensland Acid Sulfate Soil Technical Manual, Soil Management Guidelines, Version 3.8, SE Dear, NG Moore, SK Dobos, KM Watling and CR Ahern -  
[http://www.derm.qld.gov.au/land/ass/pdfs/soil\\_mgmt\\_guidelines\\_v3\\_8.pdf](http://www.derm.qld.gov.au/land/ass/pdfs/soil_mgmt_guidelines_v3_8.pdf)
- RTA Code of Practice for Water Management  
<http://www.rta.nsw.gov.au/environment/downloads/wcop1.pdf>
- Environmental Noise Management Manual -  
[http://www.rta.nsw.gov.au/environment/noise/noise\\_management\\_manual.html](http://www.rta.nsw.gov.au/environment/noise/noise_management_manual.html)
- Soil Survey Standard Test Method, Unified Soil Classification System: Field Method -  
<http://www.environment.nsw.gov.au/resources/soils/testmethods/usc.pdf>
- Spray drift fact Sheet-APVMA - [http://www.apvma.gov.au/use\\_safely/spray\\_drift/index.php](http://www.apvma.gov.au/use_safely/spray_drift/index.php)
- Why do fish need to cross the road? - NSW DPI -  
[http://www.dpi.nsw.gov.au/\\_data/assets/pdf\\_file/0004/202693/Why-do-fish-need-to-cross-the-road\\_booklet.pdf](http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0004/202693/Why-do-fish-need-to-cross-the-road_booklet.pdf)
- QLD standard work method for the assessment of the lawfulness of releases to waters from construction sites- [http://www.derm.qld.gov.au/environmental\\_management/pdf/compliance-waters-release.pdf](http://www.derm.qld.gov.au/environmental_management/pdf/compliance-waters-release.pdf)
- Australian Rainfall and runoff – Flood analysis and design – [www.arr.org.au](http://www.arr.org.au)



## 28 DEFINITIONS AND ACRONYMS

References to Acts include any amendments to Acts together with a reference to Regulations and instruments made under them.

The following definitions apply;

**Aboriginal** means a person who is a member of the Aboriginal race of Australia.

**Aboriginal member** means a member of the Authority appointed from a panel of persons nominated by the Land Councils.

**Aboriginal tradition** has the same meaning as in the Land Rights Act.

**Administering Authority** - An authority with legislative jurisdiction, this includes the AAPA, DoI, DLPE, EPA and DLRM.

**AAPA** - Aboriginal Areas Protection Authority

**Aquifer** means a geological structure or formation, or an artificial land-fill, permeated or capable of being permeated permanently or intermittently with water.

**Archaeological object** means a relic pertaining to the past occupation by Aboriginal or Macassan people of any part of Australia which is now in the Northern Territory, being:

- an artefact or thing of any material given shape to by man;
- a natural portable object of any material sacred according to Aboriginal tradition;
- human or animal skeletal remains; or
- such objects, or objects of a class of objects, as are prescribed; but does not include an artefact made for the purposes of sale or an object, or objects of a class of objects, excluded by the Regulations from the ambit of this definition.

**Archaeological place** means a place pertaining to the past occupation by Aboriginal or Macassan people that has been modified by the activity of such people and in or on which the evidence of such activity exists, and includes such places, or place of a class of places, as are prescribed, but does not include a place, or a place of a class of places, excluded by the Regulations from the ambit of this definition.

**ARI** - Average Recurrence Interval

**Authority Certificate** means a certificate issued under section 22(1) of the *Northern Territory Aboriginal Sacred sites Act*.

**Bed and banks**, in relation to a waterway, means the land over which normally flows, or which is normally covered by, the water of the waterway, whether permanently or intermittently, but does not include land from time to time temporarily covered by the flood waters of the waterway and abutting on or adjacent to its bed and banks. The bed being the relatively flat portion and the banks being the relatively steep portions of the land comprising the bed and banks.

**Best practice environmental management** has the same meaning as that included in the *Waste Management and Pollution Control Act* (WMPC Act). This can be taken to mean the management of an activity or premises in a cost effective manner that, having regard to national or international practices for management of activities or premises of the same kind, ensures the continued minimisation of the actual or potential environmental impact of the activity or purposes

**Best practice licence** means: (a) a best practice licence granted under section 34 of the *Waste and Pollution Control Act*; or (b) a licence that is to be taken to be a best practice licence by virtue of section 44(6) of the Act.

**Bore** means a bore, hole, well, excavation or other opening in the ground, or a natural or artificially constructed or improved underground cavity, which is or could be used for the purpose of intercepting, collecting, obtaining or using ground water or for the purpose of disposing of water or waste below the surface of the ground, or which extends to an aquifer.

**CEMP** – Contractor’s Environmental Management Plan

**Clean waters** means upstream (or run on or up slope) waters, the condition of which has not been affected by construction work or related activities.

**Contaminant** means a solid, liquid or gas or any combination of such substances and includes:

- noise, odour, heat and electromagnetic radiation;
- a prescribed substance or prescribed class of substances; and
- a substance having a prescribed property or prescribed class of properties.

**Contaminated land** is land with the presence of a substance in, on or under the land at a concentration above that which it is normally found in that locality, such that there presents a risk of harm to human health or to the environment.

**Construction site** means a place at which construction work is undertaken, and any other area in the vicinity where plant or other material used or to be used in connection with the construction work is located or kept during the construction work. It does not include a place where elements are manufactured 'off site' or where construction material is stored as stock for sale or for hire.

**Construction project** means a project involving construction work, and includes design, preparation, and planning.

**Corrective action** - Measures, including preventative measures taken to rectify conditions which have caused or might cause nonconformity.

**Corrective action request (CAR)** - A formal advice/instruction from the Administrating authority regarding departures from the Quality system or methods as approved in the Quality plan.

**CPESC** - Certified Professional Erosion and Sediment Control practitioner

**CPSS** - Certified Professional Soil Scientist

**Dangerous goods** has the same meaning as within the *Dangerous Goods Act* meaning substances or things:

- declared by the Competent Authority under section 6; or
- prescribed by the Regulations, to be dangerous goods.

**dB (A)** - The measure of sound pressure according to human response.

**Dewatering** means any activity that involves the removal of ponded stormwater or infiltrated groundwater from any location on Site and the subsequent reuse or discharge of that water.

**Disposition** - Action to be taken to resolve non-conformance.

**DoI** - Department of Infrastructure

**DLPE** - Department Lands Planning and Environment

**DLRM** - Department Lands Resource Management

**Dust or smoke sensitive place** - Residential dwelling, industrial area or natural environment susceptible to adverse effects from dust or smoke.



**Ecologically sustainable development** means development that improves the total quality of life both in the present and in the future in a way that maintains the ecological processes on which life depends.

**EIS** – an Environmental Impact Statement as defined in the *Environmental Protection and Biodiversity Conservation Act* (EPBC Act).

**Environment** means land, air, water, organisms, ecosystems and the built environment and includes:

- external factors which affect the well-being of humans;
- structures made or modified by humans;
- the physical and visual amenity values of an area; and
- economic, cultural and social conditions.

**Environmental incident** means a discrete (one-off) occurrence that may result in an adverse impact (or impacts) on the environment or a breach of legislation.

**Environmental harm** - As defined by the *Waste management and Pollution Control Act*, including nuisance, serious and material environmental harm, environmental harm means:

- any harm to or adverse effect on the environment; or
- any potential harm (including the risk of harm and future harm) to or potential adverse effect on the environment, of any degree or duration and includes environmental nuisance.

**Environment protection approval** - means an approval granted under section 34 of the WMPC Act

**Environment protection licence** means:

- An environment protection licence granted under section 34; or
- A licence that is to be taken to be an environment protection licence by virtue of section 44(3) of the WMPC Act.

**Environmental nuisance** means:

- An adverse effect on the amenity of an area that:
  - a) Is caused by noise, smoke, dust, fumes or odour; and
  - b) Unreasonably interferes with or is likely to irrationally interfere with the enjoyment of the area by persons who occupy a place within the area or are otherwise lawfully in the area; or
  - c) An unsightly or offensive condition caused by contaminants or waste.

**Environment protection objective** means an environment protection objective under Part 4 of the WMPC Act as amended and in force from time to time.

**EPA** – Environment Protection Authority

**EPBC** - Environment Protection and Biodiversity Conservation

**ESCP** - Erosion and Sediment Control Plan

**Excavation** includes any earthwork, trench, well, shaft, tunnel or underground work.

**Exclusion zone** is an area not to be entered by any person or machine for the duration of the contract or otherwise designated period of time.

**Feral animal** is as defined in the *Territory Parks and Wildlife Conservation Act* and means a species of animal or an animal of a species that is declared to be a feral animal under section 47.

**Ground water** means water occurring or obtained from below the surface of the ground (other than water contained in works, not being a bore, for the distribution, reticulation, transportation, storage or treatment of water or waste) and includes water occurring in or obtained from a bore or aquifer.

**Hazard** means anything (including an intrinsic property of a thing), or situation with the potential to cause harm to people, property or the environment. Hazardous material means a substance or thing that is a dangerous good, within the meaning of the *Dangerous Goods Act*, or a product or substance that has the potential to harm life, health, property or the environment.

**Heritage object** means an object declared under section 18 of the Heritage Act to be a heritage object.

**Heritage place** means a place in the Northern Territory (whether or not covered by water) declared under section 17 of the *Heritage Act* to be a heritage place.

**Hold point** - A Hold point is a mandatory verification point beyond which a work process cannot proceed without authorisation by the contract administrator. The work cannot proceed until the contract administrator is able to verify the quality of the completed work and releases the Hold.

**IECA** - International Erosion Control Association

**Land** includes water and air on, above or under land.

**Listed waste** means a waste prescribed for the purposes of this definition under the WMPC Act.

**Material environmental harm** means environmental harm that:

- is not trivial or negligible in nature;
- consists of an environmental nuisance of a high impact or on a wide scale;
- results, or is likely to result, in not more than \$50,000 or the prescribed amount (whichever is greater) being spent in taking appropriate action to prevent or minimise the environmental harm or rehabilitate the environment; or
- results in actual or potential loss or damage to the value of not more than \$50,000 or the prescribed amount (whichever is greater).

**MSDS** - Material Safety Data Sheets, now known as SDS

**NOI** – Notice of Intent is the referral document provided to the NT EPA for the purpose of deciding whether a public environmental report or environmental impact statement should be required for the project.

**Noise sensitive place** as identified as a residential area, hospital, aged care facility, school, place of business.

**Non-conformance report (NCR)** - A mandatory (standard format) report submitted by the contractor that details the nonconforming work and the contractor's proposed disposition of the non-conformance.

**Notice of non-conformance (NNC)** - Formal instruction from the superintendent regarding product non-conformance to that specified.

**NRETAS** - The former Northern Territory Government Department of Natural Resources, Environment, the Arts and Sport

**NT EPA** – Northern Territory Environment Protection Authority

**PER** – Public Environmental Report .

**Pesticide** has the same meaning as within the Waste Management and Pollution Control regulations.

**Pollution** means:

- a contaminant or waste that is emitted, discharged, deposited or disturbed or that escapes; or
- a contaminant or waste, effect or phenomenon, that is present in the environment as a consequence of an emission, discharge, deposition, escape or disturbance of a contaminant or waste.
- in relation to water (from the *Water Act*), means directly or indirectly to alter the physical, thermal, chemical, biological or radioactive properties of the water so as to render it less fit for a prescribed beneficial use for which it is or may reasonably be used, or to cause a condition which is hazardous or potentially hazardous to:
  - a) public health, safety or welfare;
  - b) animals, birds, fish or aquatic life or other organisms; or
  - c) plants.

**PSR** - Project Specific Requirement section of RFT/RFQ

**RA** – Risk Assessment is a form of environmental assessment undertaken in the Northern Territory.

**RFQ** - Request For Quotation (Equivalent to RFQ)

**RFT** - Request For Tender (Equivalent to RFT)

**Sacred Site** is that defined with the *Northern Territory Aboriginal Sacred Sites Act* and the *Land Rights Act*.

**SDS** Safety Data Sheets – formerly known as Material Safety Data Sheets (MSDS)

**Serious environmental harm** means environmental harm that is more serious than material environmental harm and includes environmental harm that:

- is irreversible or otherwise of a high impact or on a wide scale;
- damages an aspect of the environment that is of a high conservation value, high cultural value or high community value or is of special significance;
- results or is likely to result in more than \$50,000 or the prescribed amount (whichever is greater) being spent in taking appropriate action to prevent or minimise the environmental harm or rehabilitate the environment; or
- results in actual or potential loss or damage to the value of more than \$50,000 or the prescribed amount (whichever is greater).

**Structure** means:

- any building, steel or reinforced concrete construction, railway line or siding, tramway line, dock, ship, submarine, harbour, inland navigation channel, tunnel, shaft, bridge, viaduct, waterworks, reservoir, pipe or pipeline (whatever it contains or is intended to contain), structural cable, aqueduct, sewer, sewerage works, gasholder, road, airfield, sea defence works, river works, drainage works, earthworks, constructed lagoon, dam, wall, mast, tower, pylon, underground tank, earth retaining construction, fixed plant, construction designed to preserve or alter any natural feature, and any other similar construction, and
- any formwork, false work, scaffold or other construction designed or used to provide support or access during construction work.

**Temporary Erosion and Sediment Control Measures** - Measures implemented by the Contractor to minimise environmental harm from erosion and sediment control during construction that are removed post finalisation of construction works.

**Waste** as defined by the WMPC Act:

- a solid, a liquid or a gas; or
- a mixture of such substances, that is or are left over, surplus or an unwanted by-product from any activity (whether or not the substance is of value) and includes a prescribed substance or class of substances.

**Water** includes:

- surface water, ground water and tidal waters;
- coastal waters of the Territory, within the meaning of the *Coastal Waters (Northern Territory Powers) Act 1980* of the Commonwealth; and
- water containing an impurity.

**Weed** - a declared plant is a plant that is declared under section 7 of the *Weeds Management Act*.

**Witness point** - A Witness point is an identified point in the process where the contract administrator may review, witness, inspect or undertake tests on any component, method or process of works. The contractor is required to notify the contract administrator who may or may not take the opportunity. The project however, may proceed.

**WMPC** - *Waste Management and Pollution Control Act*

**Worksite** means the area in which all works take place including sidetracks, hardstands, extractions, access tracks, vehicle turn around areas, camps, stockpile sites, plant etc.

**Unacceptable levels of deterioration** means levels exceeding values prescribed in legislation or otherwise defined in the contracts, permits, licences and approvals.

**Vibration sensitive receptor** means any structure or sensitive equipment (above or below ground) susceptible to damage or person subject / susceptible to discomfort caused by vibration.

<b>29 NORTHERN TERRITORY CLIMATE ZONES TABLE</b>						
		<b>NTCZ 01</b> Areas south of, and including, Tennant Creek	<b>NTCZ 02</b> Tennant Creek and south of and including Katherine, and areas more than 50 km from the coast	<b>NTCZ 03</b> Areas north of Katherine and areas between 10 km and 50 km from the coast or tidal estuaries	<b>NTCZ 04</b> Areas less than 10 km from the coast or tidal estuaries	<b>NTCZ 05</b> Areas inside buildings
<b>ISO 9223</b>	<b>Atmospheric Corrosivity Classification</b>	3	4	5	5	2
<b>AS 1170</b>	<b>Wind Region</b>	A4	B	B & C	C	n/a
<b>AS 1192</b>	<b>Service Condition Category</b>	2	3	4	5	n/a
	<b>Corrosion Category</b>	B	C & F	D	E	C
<b>AS 1231</b>	<b>Thickness Grade</b>	AA15	AA25	AA25	AA25	AA10 Low airborne moisture levels
						AA15 High airborne moisture levels
<b>AS/NZS 2312</b>	<b>Climate Category</b>	B	C & F	F	E & F	n/a
<b>AS 2423</b>						
<b>AS/NZS 4534</b>						
<b>AS 2699</b>	<b>Durability Classification</b>	R1 (Green mark)	R2 (Yellow mark)	R3 (Red mark)	R4 (White or blue mark)	R1 (Green mark)
<b>AS 3566.2</b>	<b>Corrosion Resistance Class</b>	3	4	4	4	n/a
<b>AS 3715</b>	<b>Service Condition Category</b>	3	4	5	5	n/a
	<b>Atmospheric Corrosivity Classification</b>	3	4	5	5	n/a

