

<b>Document title</b>	Dig Hard Excavations Environmental Plan
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Acronyms	Full form
Dig Hard Excavations	Dig Hard Excavations
DHE	Dig Hard Excavations
PMP	Project Management Plan
WHS	Work, Health and Safety
EMS	Environmental Management System
P&W	Power and Water Corporation
SWMS	Safe Work Method Statement
PRA	Project Risk Assessment
ERP	Emergency Response Plan

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# 1 INTRODUCTION

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This document is the CROM Pty. Ltd. trading as Dig Hard Excavations main WHS document, that is updated to suit project requirements.

The document has been developed in conjunction with:

- RFT / Scope of works,
- ISO 14001 Environmental Management System Standard, and,
- NTG Standard Specification for Environmental Management Version 2.0.

This plan has been amended to suit the requirements for this project.

## 2 PROJECT DESCRIPTION

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### 2.1 DESCRIPTION OF WORKS

The following works have been identified for the project:

#### Water Supply Systems

A general outline of the work to be carried out under the contract comprises:

Repairs and maintenance to water mains, elevated and ground level water storage including all pipework, buildings, compounds and other assets forming components of water supply system. Works include but are not limited to the following:

- Corrosion protection and protective coatings
- Preventative maintenance works on all abovementioned equipment associated with the operation of water systems
- Provision of marked up drawings when changes / modifications are made to equipment and or systems infrastructure.
- Repair and maintenance of pumps and pumping systems
- Repair and maintenance of valves, valve boxes and valve pits
- Repair and maintenance to above and below ground hydrants
- Repair and maintenance to plastic, polyethylene, fibreglass, concrete and/or steel elevated/ground level water storage tanks and stands and associated valves and pipework
- Repairs and maintenance of bores and associated works
- Repairs and maintenance of chemical dosing systems
- Repairs and maintenance of house connections – water service pipes, meters and meter installations
- Repairs and maintenance of transmission and reticulation water mains and associated fittings including repairs and maintenance to all mains
- Repairs and maintenance of water transfer pumping stations and associated pipework and equipment
- Repairs to buildings and fencing
- Repairs to tracks, hardstand, bitumen driveways and roadways,
- The excavation, bedding, backfilling and associated works necessary to construct/replace water mains and associated infrastructure such as valves and valve pits

#### Sewage Systems

A general outline of the work to be carried out under the contract comprises:

Repairs and maintenance to gravity and rising mains, pumping stations, buildings, compounds and other assets forming components of sewerage disposal systems. Work include but are not limited to the following:

- Corrosion protection and protective coatings
- De-sludge sewage ponds
- Excavation, bedding, backfilling and associated works necessary to repair and construct sewer rising and gravity sewers and associated infrastructure such as valves, valve pits and manholes
- Inspection and pressure cleaning of gravity sewers including removal of blockages
- Inspection, monitoring and/or testing of sewer systems for infiltration
- Preventative maintenance works on all abovementioned equipment associated with the operation of sewerage systems

- Provision of marked up drawings when changes / modifications are made to equipment and/or systems infrastructure
- Provision of marked up drawings when changes / modifications are made to equipment on site
- Pumping out of pump station wet wells (requiring vacuum truck services)
- Pumping out of vacuum pits and or pump station wet wells (requiring vacuum truck services)
- Repairs and maintenance of access chambers
- Repairs and maintenance of chemical dosing systems
- Repairs and maintenance of house connections
- Repairs and maintenance of pump stations and associated pipework and equipment
- Repairs and maintenance of rising mains and gravity sewers
- Repairs and maintenance of sewage ponds and pipework associated with sewage ponds
- Repairs and Maintenance of Vacuum Systems and Septic Tank Effluent Pumping (STEP) systems.
- Repairs to buildings and fencing
- Repairs to tracks, hardstand, bitumen driveways and roadways
- Scouring of sewer gravity and rising mains
- Undertake Closed Circuit Television (CCTV) inspection of sewer mains

## 2.2 PROJECT APPROVALS, LICENCES AND PERMITS

All approvals, licences and / or permits required for this project works will be obtained prior to action at the identified location, identified below.

Approval, Licence, Permit	Location of Document	Required	
		Yes	No
Dial Before You Dig	Onsite	X	
AAPA - Identification of any culture, heritage areas as per AAPA Certificate	Onsite	X	
Lot / Land - Approval obtained by local council for Placement of Camp (old wild geese site)	Onsite	X	
Gravel / Imported Fill – Approved by	Onsite	X	
Water Extraction – existing water onsite – not required	Onsite		X
Electrical Camp – Already existing services – Not required	Not required		X
Food Licence – No commercial cooking is conducted onsite; each person will be cooking their own meals	Not required		X

## 2.3 PROJECT AMENITIES

Amenity Type	Actions
Toilets / Washing Hands	Toilets will be located and advised on site specific induction
Site Office / Crib Room	Site office will be advised on site specific induction

Camp / Accommodation	Not required
Food	No food will be required to be supplied
Drinking Water	Individual water bottle for use onsite

## 2.4 WORKING HOURS

Approved working hours will be 7.00 am – 5.00pm Monday to Friday no work will be carried out on Sundays and public holidays. Works outside these hours will require written approval from the client.

Nearby residents and businesses will be advised of the new work hours prior to implementation.

### 3 LEGAL & LEGISLATIVE REQUIREMENTS

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The following legislative requirements have been identified for this project works, but not limited to:

- NT Standard Specification Environmental Management
- AS/NZS AS 4801 OHS Management System
- AS/NZS ISO 9001 Quality Management System
- AS/NZS ISO 14001 Environmental Management System
- Northern Territory Work Health and Safety Act
- Northern Territory Work Health and Safety Regulations
- Aboriginal Sacred Sites Act
- Dangerous Goods Act
- Environment Protection and Biodiversity Conservation Act
- Heritage Conservation Act
- Waste Management and Pollution Control Act
- Water Act
- Weeds Management Act.

Additional Codes of Practices / Legislation and or Standards may also be applicable.

#### 3.1 MONITORING LEGISLATIVE REQUIREMENT

The QHSE Officer is responsible for monitoring of the legislative requirements.

Quarterly checks are conducted to ensure that we are current with the requirements. Old versions of items are removed from access.

Any changes to legislation, Australian standard, Codes of Practice is communicated to all personnel through but not limited to:

- Dedicated Toolbox Talk / Prestart Meetings
- Emails.

#### 3.2 LEGISLATIVE OBLIGATIONS

The company strives to:

- Ensure the risk of injury or illness from a workplace is minimised for persons coming onto the workplace to work
- Ensure the risk of injury or illness from any plant or substance provided by the person for the performance of work by someone other than the person's workers is minimised when used properly
- Ensure there is appropriate, safe access to and from the workplace for persons other than the person's workers

A worker or anyone else at a workplace has the following obligations at a workplace:

- To comply with the instructions given for workplace health and safety at the workplace by the employer at the workplace and any principal contractor for construction work at the workplace
- For a worker—to use personal protective equipment if the equipment is provided by the worker's employer and the worker is properly instructed in its use
- Not to wilfully or recklessly interfere with or misuse anything provided for workplace health and safety at the workplace
- Not to wilfully place at risk the workplace health and safety of any person at the workplace
- Not to wilfully injure himself or herself



## 4 OBJECTIVES AND TARGETS

The following objective / targets have been identified for the project / company.

Objective	Resources Required	Target / Completion Date	KPI / Monitoring Requirements	Responsible Person/s
Meeting Legislative Requirements	Company Legislative Register	Ongoing	Review PMP Monthly	QHSE Officer / Onsite Manager
Daily Prestart / Take 5	Daily Prestart Form	100%	Completed daily	Onsite Manager
Toolbox Meeting	Toolbox Form	100%	One completed monthly	Onsite Manager
Incident reduced by 10%	Incident Form / Competent personnel	<10%	Reports per month reduced	All Site Personnel
3 - monthly Audits completed	3- Monthly Audit form Competent personnel	100%	Report received 3 - monthly	QHSE Officer / Onsite Manager
Monthly Inspections	Monthly inspections form Competent personnel	100%	Report received monthly	QHSE Officer / Onsite Manager
Close out of non-conformances in a timely manner	Nonconformance Register	100%	Corrective Action closed within 30 days of identifying	QHSE Officer / Onsite Manager
Inductions completed	Induction register	100%	Induction register personnel registered onsite, matches daily prestart / take 5	QHSE Officer / Onsite Manager
Culture / Heritage Damage	AAPA – Exclusion Zones	Ongoing	Nil damage to environment – No Incident reports, all areas marked out to prevent any damage	QHSE Officer / Onsite Manager

### 4.1 REVIEWING OF OBJECTIVES / TARGETS

The QHSE Officer, Onsite Manager in conjunction with the Managing Director reviews the Objective / Targets on a continual basis to ensure that the items are being met.

Where a change to the objective / targets are required, this plan will be reviewed, updated to identify the new changes, communicated to all person/s the new requirements, through the re-issue of the plan.

## 5 MANAGEMENT COMMITMENT

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Dig Hard Excavations is committed to ensuring that all Workers are safe from injury and risks to their health whilst at work. This commitment must be accepted and undertaken by Management and communicated to Workers.

Primary responsibility lies with the **PCBU**. The PCBU is primarily responsible for the health and safety of all Workers, contractors and visitors. This responsibility is to be ranked equally with all other operational considerations.

The **PCBU** will set the highest practicable standards in meeting Dig Hard Excavations legislative obligations under the relative Health and Safety Legislation by providing:

- A safe and healthy work environment;
- A safe system of work;
- Safe plant and substances;
- Provide adequate facilities for the welfare of workers;
- Information, training, instruction and supervision as is necessary to ensure that these objectives are met;
- **and**
- An effective means of communication and consultation with Workers on health and safety issues.

Dig Hard Excavations recognises that a pro-active approach is the most effective means of preventing workplace injuries and illness. However, this approach will be dependent upon the following factors:

- All Workers and contractors being involved and committed to improving safety within the workplace.
- All managers being made responsible and accountable for the health and safety of all Workers under their control.
- All managers consulting effectively with Workers on all matters affecting health and safety.
- All managers will be assigned responsibilities for providing the required procedures that will achieve the aims and objectives set out in this document.
- The provision of adequate training, instruction and supervision of all Workers to assist them in meeting their safety responsibilities.
- Workers meeting their obligations under the relative Health and Safety Legislation by working in a manner so as not to injure themselves or others; following directives for health and safety and wearing Personal Protective Equipment (PPE) as required.

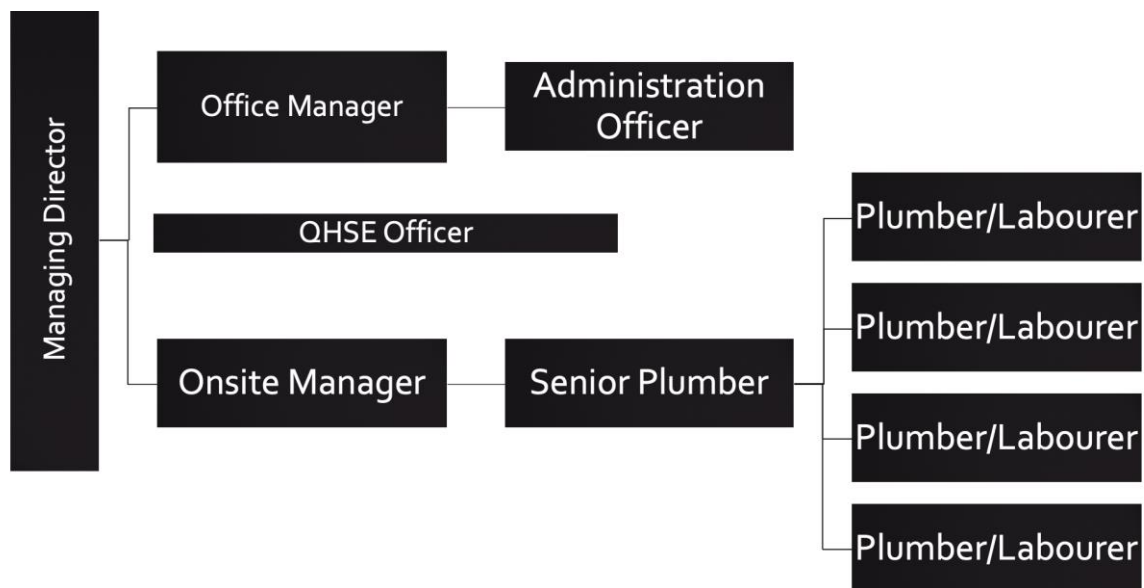
Dig Hard Excavations acknowledges responsibility for the health and safety of all Workers, contractors and visitors and will provide adequate resources to meet the legislative requirements and the aims and objectives outlined in this document.

We will ensure that there is an adequate structure to implement these policies and that all levels of management are given the responsibilities necessary to ensure its success and will hold all levels of management accountable for work health and safety matters.

The primary responsibility of all managers and supervisors will lie in controlling hazards through the process of identification, assessment, control, evaluation and monitoring.

These responsibilities will be best achieved through consultation with Workers, thus facilitating involvement and co-operation.

## 6 COMPANY / PROJECT ORGANISATIONAL CHART



### 6.1 CONTACT DETAILS OF MANANAGEMENT

Name	Position	Phone Number	Email Details
Bruce Stapledon			
Khayla De Ausen			

## 7 ROLES AND RESPONSIBILITIES

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### 7.1 COMPANY RESPONSIBILITIES

Dig Hard Excavations understands that Duties under the WHS Act are not transferable to another person.

A person may have more than one duty by virtue of being in more than one class of duty holder. If more than one person has a duty for the same matter each person retains responsibility for that matter and must discharge their duty to the extent to which they have the capacity to influence and control the matter.

Dig Hard Excavations will ensure that the work on sites to is conducted in such a way to eliminate risks to health and safety so far as is reasonably practicable and if it is not reasonably practicable to eliminate risks to health and safety, Dig Hard Excavations will minimise the risks to health and safety so far as is reasonably practicable and will provide as per below:

- A safe work environment
- Adhere to all EPA requirements
- AAPA certificates,
- Sacred / Heritage Sites
- Maintenance of plant and structures
- Systems to monitor, record and review works
- Safe storage for plant and substances
- Adequate facilities for the welfare of workers
- Provide workers with PPE
- Monitoring of health conditions to prevent injury or illness

Dig Hard Excavations company directors and those identified by [the Corporations Act 2011](#) have a duty to exercise due diligence to ensure that the business or undertaking complies with the WHS Act and Regulations and environmental identified legislation other requirements.

### 7.2 MANAGER'S RESPONSIBILITIES

Managers will have and keep up to date their knowledge and understanding of environmental compliance matters. Managers will have an understanding of the nature of the works being conducted and the associated hazards and risks associated with performing the works that may impact on the environment.

Managers will ensure that there are available for use and uses the resources and systems to eliminate or minimise the hazards and risks associated with conducting works.

Risks or hazards identified whilst conducting inspections or during the performing of tasks will be assessed and work processes will be reviewed to eliminate or minimise the risk or hazard before works will be allowed to continue.

Managers will consult with workers, ensure training, give instruction with regards to assisting with environmental compliance.

### 7.3 SUPERVISOR RESPONSIBILITIES

Supervisors appointed by senior management will ensure that:

- This environmental plan is current for the project scope of works
- Review aspects / impacts
- Conduct training for all personnel
- Assist in any environmental incident investigation,
- Ensure that the project heritage, culture and APPA requirements are adhered to,
- Ensure waste is disposed in accordance with suite requirements

Any new environmental risks or hazards identified whilst conducting inspections or during the performing of tasks will be assessed and work processes will be reviewed to eliminate or minimise the risk or hazard before works will be allowed to continue, updated in the project risk assessment, and or this plan where required.

Supervisors will ensure that a work schedule is in place to coordinate the works being conducted and that all high-risk works are done with a SWMS in place that will be monitored and reviewed. Supervisors are to report to the Managers.

#### **7.4 ALL WORKERS AND SUB CONTRACTORS**

It is the responsibility of all workers and sub-contractors employed by Dig Hard Excavations to:

- Take reasonable care for his or her own health and safety
- Adhere to all environmental site requirements
- Comply, so far as the worker is reasonably able, with any reasonable instruction that is given by the person conducting the business or undertaking to allow the person to comply with the Legislation and
- Co-operate with any reasonable policy or procedure of the person conducting the business or undertaking relating to health or safety at the workplace that has been notified to workers.
- The worker must, so far as the worker is reasonably able, use or wear the equipment in accordance with any information, training or reasonable instruction
- The worker must not intentionally misuse, or damage equipment or PPE issued
- The worker must inform onsite supervisor of any damage to, defect in or need to clean or decontaminate any of the equipment or PPE of which the worker becomes aware.
- All workers and sub-contractors will attend inductions.
- All workers and sub-contractors are to report to immediate Supervisor

#### **7.5 VISITORS AND OTHER PERSONS AT THE WORKPLACE**

A visitor or other person at a workplace must;

- Take reasonable care for his or her own health and safety; and
- Take reasonable care that his or her acts or omissions do
- Not adversely affect the health and safety of other persons; and
- Will comply, so far as the person is reasonably able, with any reasonable instruction that is given by the person conducting the business or undertaking to allow the person conducting the business or undertaking to comply with the legislation.
- Visitors and other personnel are to report to immediate Supervisors on site.

## 8 TRAINING AND INDUCTIONS

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Dig Hard Excavations has a developed a project induction but will identify but not limited to:

- Company Policies, Procedures,
- Incident / Accident reporting – investigation,
- Nonconformances, corrective actions,
- AAPA,
- RWA – Restricted work areas,
- Sensitive areas / Culture awareness,
- Emergency Preparedness,
- Environmental Training Awareness.

Company inductions are completed for all person/s who are undertaking works for the company and utilising the company management system resources.

## 9 ENVIRONMENTAL POLICY

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Dig Hard Excavations is committed to:

- Maintaining or enhancing the services or product provided to customers while simultaneously minimizing our resource use and operating costs
- Achieving compatibility between economic development and the maintenance of the environment ensuring that proper consideration is given to the care of the flora, fauna, air, land, water and the community, which may be affected by our activities.
- Ensuring that we comply with local and state government legislation pertaining to the operation of the business, in addition to Government legislation and guidelines relating to the impact of the business on the surrounding environment
- Providing a safe and clean environment
- Limiting the impact that the business has on the surrounding environment through the sound and careful management of its activities
- Supporting and complying with the protection of areas and artefacts of Cultural Heritage

Dig Hard Excavations acknowledges the benefits of environmental management and undertakes to fulfil its legal and community duty, by taking all reasonable and practical measures to prevent or minimise harm to the environment by meeting the requirements of ISO 14001.

All Workers, contractors and visitors are directed to act likewise by exercising due diligence toward the environment in all their activities.

To fulfil this commitment, Dig Hard Excavations will observe all environmental laws and promote environmental awareness among all Workers to increase an understanding of environmental matters.

Dig Hard Excavations also undertakes to notify the relevant authority in the event of a major environmental impact that causes harm or has the potential to cause harm to the environment.

## 10 COMMUNITY CONSULTATION & COMPLAINTS

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Dig Hard Excavations will 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.

Consultation will be conducted through but not limited to; emails, letters and or community notices.

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.

Within 1 working day of receiving a complaint about any environmental issue, including pollution, Dig Hard Excavations will supply a written report to Power and Water detailing the complaint and action taken to alleviate the problem.

A register of all such complaints will be maintained, 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.



## **11 NONCONFORMANCE / CORRECTIVE ACTIONS**

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All company personnel and sub-contractors are responsible for identifying and reporting non-conformances and recommending corrective and preventative actions.

The Managing Director is responsible for approving corrective and preventative action, and for following up to ensure action has been implemented and is effective.

The Office Administrator is responsible for ensuring records of corrective and preventative actions are maintained.

### **11.1 NON-CONFORMANCE IDENTIFIED**

Every member of the organisation, including sub-contractors, is expected to identify and report any problems that arise, either with procedures, processes, equipment, workmanship, late arrival of material, wrong supplies, or any other occurrence that leads to a failure to produce quality work, in the required time, and to the client's total satisfaction.

Any complaints from clients are also to be handled in accordance with this procedure.

With all interested and affected people, Dig Hard Excavations determines, agrees, records and implements the outcomes.

### **11.2 CORRECTIVE ACTION / RECTIFY THE PROBLEM**

If the person identifying the problem is able to correct it immediately, he/she does so and carries on. If not, the Managing Director is notified. A note is made in the daily diary and an Incident and Accident Report is completed.

### **11.3 REPORT PROBLEM TO MANAGING DIRECTOR**

The nature of the problem, and suggested/implemented corrective action, are reported to the Managing Director in a timely manner, without retribution. If the problem is such that a job will not be able to be completed in the required time, or a safety issue is involved, then the report is immediate. Otherwise the time of reporting is dependent on the seriousness of the problem and the consequences.

### **11.4 MANAGING DIRECTOR APPROVES CORRECTIVE ACTION**

All personnel have delegated authority to approve disposition of non-conformances where the corrective action is within their capability. The Managing Director approves all other actions. Corrective action may take one or more of the following forms.

- Replacement of defective parts and materials, or rework in the case of defective workmanship. Usually this is at no cost to the client.
- Negotiation with client for acceptance with concession. The Managing Director must approve this action.

In cases where the client's (or other party's) property is affected the Managing Director also informs the client and other involved parties.

The nature of the problem and the corrective action taken are recorded in the Job File and on the Register of Incidents/Accidents.

### **11.5 FOLLOW UP**

At an appropriate time, depending on the nature of the problem and the action taken, the Managing Director ensures that follow up occurs to check that the action taken was effective and has corrected the problem. The result of this follow up is noted in the Job File.

## 12 ENVIRONMENTAL INCIDENT MANAGEMENT

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Manage an incident from development through to completion until the worksite is safe or emergency response professionals arrive, as follows

Stop work immediately and take the necessary action to stop the cause or the breach

Notify the construction Managing Director/ foreman immediately and take all steps to minimise the damage and limit the impact (effect) of the breach

If the breach is serious and additional resources other than what is available to is required, then notify the local authorities and the EPA with the aim of getting specialist assistance quickly.

Environmental incident will be recorded within the incident / accident register, and or nonconformance register if applicable.

## 13 ENVIRONMENTAL PROTECTIONS

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The environmental protection measures outlined in this section are deemed to be the minimum requirement for all Workers of Dig Hard Excavations. The purpose of the environmental protection measures adopted by Dig Hard Excavations is to provide all personnel with the necessary information so as to ensure that sound environmental work practices and procedures are followed in accordance with Health and Safety and Federal Environmental Protection Statutes, Regulations, By-laws and Lease Agreements.

- You are not to interfere with any drainage pipes, sewage or electrical services without first seeking the written approval of the **Person in Control**. Nor are you permitted to interfere with any areas that are undergoing any environmental rehabilitation.
- You are to treat environmental hazards in the same manner as Work Health and Safety Hazards, in that you should:
  - Identify risk(s) to the environment; and
  - Report the risk(s) to management.
- All waste materials, including domestic, industrial and biological, shall be disposed of in the manner approved by Management.
- Refuse containers, including contaminated waste shall at all times be transported in a manner as to ensure the security of the contents of the container, then disposed of at the authorised dumping location and in an appropriate manner.
- Should oil, fuel or other hazardous substance spillage occur, you should act immediately to contain the spill as trained and then report it to the *Supervisor/Team Leader* to initiate the formal clean up procedure approved by the Person in Control.
- All personnel are to ensure that the work environment is in a clean and tidy condition prior to departure at the end of each day.

Failure to comply with the environmental protection measures adopted by Dig Hard Excavations shall be deemed as a serious offence by management.

### 13.1 EMP CLAUSE ENVIRONMENTAL CONTROLS

Dig Hard Excavations as PCBU of the workplace area or premises; has the primary obligation to comply with all relevant Environmental regulations and Standards. This obligation includes maintaining equipment to specified standards, holding of appropriate licences, and ensuring any discharges to the environment or removals from the premises, satisfy prescribed levels or conditions.

All Contractor and Sub-contractor personnel must complete Dig Hard Excavations' Induction Program prior to commencement of work on the premises. This induction program will highlight to all Contracted personnel any particular aspect of the environmental legislation, which directly effects the Company's operations and their activities on the premises. It is of paramount importance that all Contractor and Sub-Contractor personnel adhere to Dig Hard Excavations' environmental policy and safe work practices.

All personnel shall advise the Supervisor/Team Leader of any incident, which may cause environmental harm

#### 13.1.1 EXAMPLES OF MINIMISING THE IMPACT OF THE BUSINESS ON THE ENVIRONMENT

Make contact with the local office of the Environmental Protection Agency and periodically check the need for licences or permits under the Act.

The removal of wildlife should include the services of an appropriate organisation.

#### Storage

- Review fuel storage requirements - Dangerous Goods Safety Management Act. At a minimum meet the requirements for Minor Storage as set out in the legislation.

- Ensure that mulch storage area is adequate and does not have the potential to wash into the creek. Expand where possible, the current reuse of green waste material onsite. Consider the purchase of mulching mower to reduce the requirements to stockpile grass.

## **Recycle**

### **Use of hazardous Substances**

- Minimise the spraying of chemicals around storm water system.
- Develop spill procedures to manage potential risk; consider bunding of bulk fuel or chemicals stores to control any spill

## **Electricity**

- Ensure electricity is turned off when areas are not in use.
- Invest in more energy efficient equipment (such as Five Star Refrigerator) and purchase equipment without digital display.
- Low wattage compact fluorescent lamps used to reduce the potential impact of lighting.
- Manual timer is used on lighting which is adjusted frequently to reflect actual lighting requirements. Motion sensor lighting used where possible.
- Ensure no incandescent ordinary light bulbs are used for security lighting. Fluorescent lamps are used instead.
- Reduce hot water system storage temperature to 65 degrees Celsius and tempering device should reduce temperature at tap to 50 degrees Celsius or below.
- Install skylights to reduce the use of electricity during the day.

## **Water**

- Ensure good ground cover is maintained across the site and that any material stockpiles or construction work areas are adequately covered / protected to prevent loss of material to storm water system.
- Ensure watering is undertaken in line with Local Council. Consider watering heavily once per week as opposed to small regular watering.
- Fix leaking water outlets immediately. Install flow restrictors where possible.

## 14 ENVIRONMENTAL RISK MANAGEMENT

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Environmental aspects / impacts, including significant impacts are identified initially within the overall Project Risk Assessment, and further transferred to this plan, identified within the risk / control area.

Continual review of the Project Risk Assessment is conducted in conjunction with inspection and audits, to ensure that no new environmental aspects have been identified.

Where a new aspect / impact has been identified, this plan will be updated to reflect, and all personnel notified of any new requirement through either re-induction or toolbox.

## 15 PROJECT ENVIRONMENTAL RISKS / CONTROLS

### 15.1 APPROVALS / LICENCES AND PERMITS

All permits and licences to be approved / obtained prior to any works commencing, including but not limited to:

- NLC, CLC, AAPA, Local Councils, Landowners, Gravel / Water Extraction, Service Authorities, and other approvals required.

Refer section within this plan for further information.

Location of approvals to be accessible for site – All approvals - permits will be **Hard Copy onsite**.

### 15.2 WEED MANAGEMENT

To ensure the environment is protected at all times, Dig Hard Excavations implements the following:

#### **Managing Director**

Before commencement of any project or job, the Managing Director

- Carries out an Environmental Impact Analysis as a requirement of the project Management Plan
- Where a noxious weed or undesirable seed is identified or the specification nominates that they exist, uses this instruction or prepare a specific action plan that takes into account the risk of distribution
- Ensures the plan is understood by all workers involved with the project/job
- Ensures that staff and employees have access to plant, equipment and resources applicable to the risk and the washing and cleaning that will be required.

#### **Site Foreman**

Before starting work at each location, the Site Foreman

- Holds a toolbox meeting and discusses environmental issues and the need to wash plant and equipment before they leave the area of infestation
- Nominates the responsible person who will clean the plant and where the cleaning will take place
- Explains the monitoring record in the Project Management Plan and ensures the responsible person is aware they must record which equipment is cleaned and when the cleaning is carried out.

#### **Responsible Nominated Person**

The responsible nominated person

- Washes and cleans all plant and equipment that has left the roadway and entered the area that is identified with the undesirable plants and seeds
- Cleans the plant and equipment prior to it leaving the contaminated area.
- Selects a location where the runoff and material cleaned off will not enter the stream or find its way onto other mobile plant passing.
- Inspects under the equipment thoroughly before releasing the plant and equipment to travel off site
- Records the actual piece of equipment washed and the date washed on the monitoring sheet.
- Notifies the Manager if an item of equipment cannot be cleaned satisfactorily with the resources made available and alters the process to allow the item of equipment to be cleaned
- Ensures the cleaning site is kept tidy, free of pools of water and is not a health and safety or environmental hazard itself.

### 15.3 SOIL EROSION

Dig hard excavations minimises soil erosion, by implementing appropriate preventative measures.

The full range of measures are set out in this procedure, and the specific measures adopted for a particular activity will depend on the type of work being carried out, i.e., major new works, minor new works, or repair and maintenance works.

- Assess the work site for features such as contour levels, vegetation, natural drainage pattern and stormwater drains, proximity of site to waterways, and soil type.

- Where practicable, program works for the dry season. If this is not possible, we:
  - Decide where risk activities are going to take place i.e. Entry/exit points, borrow pits, stockpiles, haul roads, disturbance from construction
  - Install soil erosion and sediment control measures prior to the commencement of works, where possible and re-assess these regularly as works progress.
  - Program work to limit the extent and duration of exposed earth to reduce the number of sediment and erosion control structures required across the site.
  - Retain vegetation where possible to minimise the effects of runoff over exposed surfaces
  - Hydroseed or mulch stockpiles or areas that will be exposed for longer than 3 months and install silt fencing up and/or down gradient of stockpiles as required
  - Locate stockpiles away from drainage lines or waterways
  - Limit site access to designated areas
  - Compact and trim all fill surfaces prior to any chance of rain; roughen the surface (e.g. Using a machine on tracks) on steep batters using a tracked machine as required
  - Use existing topsoil with vegetation or install protective matting or fabric to protect areas of concentrated runoff.
  - Handle vegetation to remain on site in accordance with the flora and fauna procedure
  - Undertake site rehabilitation in accordance with client requirements. Where this is not specified the site will be revegetated using local seed where possible. Use non-native sterile grasses for temporary stabilization while native flora establishes itself, if necessary.

### **Trenching activities**

Dig hard excavations

- Digs trenches down a slope, backfilling as we go.
- Limits open trenching to what can be backfilled in a day ensuring that all trenches are backfilled before weekends and public holidays.
- Saves all topsoil from the disturbed area away from natural drainage lines and other water flow paths.
- Diverts runoff away from the trench line on steep or long slopes and uses small check banks on other slopes.

When backfilling, we

- Compact the soil thoroughly
- Fill to a level above the surrounding ground
- Mix with hydrated lime in dispersible soils and
- Spread topsoil at least 50 mm thick over the trench line; then seed and fertilise.

## **15.4 STOCKPILE MANAGEMENT**

There are no stockpiles on this project work area.

Where a stockpile is required, the following will be applied:

- No stockpiles will be left / placed within 50 Metres from drains, drainage lines, creeks, and other identified waterways
- Topsoil stockpiles will not be any more than 1.5 metres high
- Other material soil stockpiles will not be any more than 3 metres high

## **15.5 FIRE MANAGEMENT**

No Fires will be lit on the project site.

Fire Extinguishers will be available that are within current test dates, located on onsite light vehicles, mobile plant, trucks. Muster point is identified as per the emergency map in the emergency plan

The site is to remain clean free from rubbish to prevent any possible fires.

### 15.6 FLORA & FAUNA MANAGEMENT

- Ensure that all personnel have appropriate training.
- Consult with officers from the Department of Natural Resources, Environment, The Arts and Sport.
- Identify the possible impact on flora and fauna as part of the Environmental Hazard Identification, Risk Assessment and Control process.
- Peg out the works area and ensure that employees and sub-contractors are aware of this via toolbox meetings.
- Move endangered flora and fauna to an area nearby designated as suitable in consultation with the departmental officer.
- Replace as much topsoil and natural vegetation as possible to rehabilitate the site after completion of work.

### 15.7 AIR POLLUTION & DUST CONTROL

- Program work so that large sections of bare areas are not exposed at any one time.
- Prevent dirt/mud from being tracked onto public roads.
- When in built-up areas or near public roads, suppress dust by watering the works.
- Use hydroseeding, spray emulsion or geofabric to stabilise areas that would otherwise be left bare for extended periods of time and pose a dust hazard
- Maintain machinery in accordance with manufacturers specifications so that emissions comply with the Northern Territory Environment Protection Policy (The Air Environment)
- Permit no fires on site unless necessary approval has been obtained
- Monitor dust generation and report complaints to the Managing Director.

### 15.8 WASTE MANAGEMENT

#### Prevention

Dig Hard Excavations reduces waste by implementing a range of preventative measures. We:

- Ensure that the quality of materials used on site minimises the need to rework
- Make accurate estimates of quantities and sizes of materials and equipment required for the work
- Use recycled materials where quality is comparable
- Avoid transporting unnecessary packaging to the site
- Track materials using a materials and assets register
- Reallocate excess materials for use on other sites
- Keep the worksite as clean as possible to reduce need for clean-up later
- Actively supervise to reduce the need to rework
- Minimise damage to the works and site
- Program works to reduce time lost due to weather.

#### Recycling

Prior to commencement of work, the Managing Director assesses the recycling possibilities in consultation with the Site Foreman and the Client.

Materials removed from a site are

- Used in other works as appropriate
- Sold to other companies for use
- Sold to others to turn into useable materials
- Removed to a public tip.

#### Prescribed Waste

All prescribed waste is handled according to the Northern Territory *Waste Management and Pollution Control Act and Regulations* May 2003.



### 15.9 NOISE POLLUTION AND VIBRATION

- Use well-maintained modern equipment with efficient mufflers.
- Work within "normal" hours, where possible.
- Notify nearby residents, local council and EPA where out of hours work is necessary.

Other noise control measures may include:

- Using alternative construction methods, forms of communication or machinery
- Using noise barriers
- Scheduling noisy activities at times of least impact
- Locating noise generating activities in non-sensitive areas
- Turning off idling vehicles/trucks near noise sensitive areas
- Selecting equipment based on machinery noise levels.

### 15.10 MACHINERY LAYDOWN AREA / SITE COMPOUND

No clearing is to be conducted outside site location, concerning laydown or parking areas.

Laydown area is within the confines of security fencing.

### 15.11 HAZARDOUS SUBSTANCES AND DANGEROUS GOODS

Storage of Dangerous Goods

- **Security**

As far as practical, there must be adequate security to prevent access to dangerous goods or combustible liquids, stored at the workplace.

- **Preventing interaction with other goods**

Dangerous Goods and combustible liquids must be stored in a manner so that in the event of a loss of containment, they are not able to react with other incompatible goods, thereby creating a dangerous situation.

- **Keeping Dangerous Goods dry**

Goods that can react or deteriorate from effects of water shall be kept dry.

- **Prevention of contamination of food or personal products**

Dangerous goods and combustible liquids must be stored in a manner so that, in the event of a leak or spill, there is no risk of contamination with food or personal products

- **Elimination of Ignition sources**

All ignition sources in a hazardous area must be eliminated or controlled to an acceptable level, to prevent fire/explosion.

**Spill containment**

- **Storage systems** should be designed to contain the contents of any spills.

This is generally achieved by 'bundling' i.e. a containment wall or device. The bund should have a capacity of 25% of the volume of the material stored or a capacity of the largest container (whichever the greater).

- **Spill kits** must be provided and be accessible, to enable containment of any spills or leaks of any dangerous goods or combustible liquid.

### 15.12 MANAGEMENT OF HAZARDOUS SUBSTANCES & DANGEROUS GOODS - TRAINING OF PERSONNEL IN THE SAFE USE OF HAZARDOUS SUBSTANCES

All personnel using hazardous substances shall be trained in their use. This training shall include:

- SDS - location/content
- Safe use of the substance
- Precautions to be taken
- Warning phrases
- Protective equipment to be used
- Emergency/spill situations

### 15.13 CHEMICAL SPILL – STRATEGIES TO MINIMISE IMPACTS

#### Strategies to minimise impact

- Avoid products and chemicals that can affect your health and damage the environment. There may be less environmentally damaging materials or lower toxicity products on the market. Ask your supplier.
- Always read the manufacturer's health warnings and follow safe practices.
- Do not allow hazardous chemicals to soak into the ground and take care not to spill chemicals. Contaminants can enter the groundwater and eventually reach rivers or our drinking water. They can also make the site unusable.
- Clean up all spills immediately to prevent contamination of the ground and stormwater. Absorbent materials, such as those found in commercial spill kits, are useful.
- For soaking up liquids. If the soil becomes contaminated, then the top layers should be scraped off as soon as possible and treated as hazardous waste.

### 15.14 WATER QUALITY

Dig Hard Excavations minimises water pollution, by implementing appropriate preventative measures.

The full range of measures are set out in this procedure, and the specific measures adopted for a particular activity will depend on the type of work being carried out.

Assess the work site for features such as contour levels, vegetation, natural drainage pattern and stormwater drains, proximity of site to waterways, and soil type.

- Where practicable, we program works for the dry season. If this is not possible, we;
  - Decide where any risk activities are going to take place
  - Install soil erosion and sediment control measures prior to the commencement of works, where possible and re-assess these regularly as works progress
  - Store possible contaminants in leak-proof containers well away from trench line, natural drainage lines and other water flow paths
  - Dispose of waste materials safely (prescribed waste - according to the northern territory waste management and pollution control act and regulations May 2003.)
  - Retain vegetation where possible to minimise the effects of runoff over exposed surfaces
  - Save all topsoil from the disturbed area away from
  - Divert runoff away from the trench line, natural drainage lines and other water flow paths
  - Limit site access to designated areas
  - Compact the soil thoroughly when backfilling
  - Fill to a level above the surrounding ground
  - Rehabilitate the trench/site.

### 15.15 WORKPLACE IMPACTS

There will be NO immediate workplace impacts on this project through the works not being undertaken in a residential area, and signage displayed on gazetted roads.

All enquiries or complaints are to be registered as per our corrective action process

### 15.16 HERITAGE, ENVIRONMENTALLY & CULTURALLY SENSITIVE AREAS

- Undertake a survey of the site to identify any areas of significance in conjunction with the client, NLC and Heritage Commission.
- Develop a project specific procedure or management plan based on the findings or recommendations of the preliminary survey, which takes into account the nature, and timing of construction.
- Ensure that the appropriate permits or authorisations (if any) have been received prior to undertaking work in these areas Scar trees may need to be protected or relocated which would require a permit.

- Comply with any special requirements of the job specifications.
- Explain all requirements clearly at site induction.

### **15.17 WOKING ON ABORIGINAL LAND**

- Obtain permits to enter Aboriginal land if applicable. Permits are required for:
  - Arnhem Land
  - Daly River Port Keats Land Trust Area
  - Malak Land Trust
  - Upper Daly Land Trust
  - Finnis River Land Trust
  - Beswick Land Trust Area
- Identify any significant sites (e.g., sacred sites) and mark clearly with steel pickets and red tape to ensure no damage occurs
- If damage does occur, cease work immediately and contact the client and the Northern Land Council.

## 16 ENVIRONMENTAL COMPLIANCE

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The QHSE Officer in conjunction with the Onsite Manager conducts audits in inspections concerning all Safety, Quality and Environmental aspects identified for the works to be undertaken.

Audits are conducted on a 3-monthly basis, and Inspections Monthly. Internal audit tool is used developed in conjunction with the relevant standard.

IMS system audits are conducted annually basis, on all system, forms, registers and manuals.

External third-party audit is not conducted by a certification body; however, an internal review is conducted to ensure that the system is still current with legislative requirements.

Any nonconformance raised will be recorded within our corrective action register, and with defined timeframes, and actions to be taken.

### 21.1 EVALUATIONS OF INSPECTIONS AND AUDITS

Results obtained from the inspections and audits, are reviewed by senior management, including findings, observations, and possible improvements.

Staff, external stakeholders are communicated results through but not limited to; Toolboxes, emails etc.

## **17 EMERGENCY RESPONSE**

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A specific emergency plan is developed that identifies emergency responses, that is an appendix to this plan.

## **18 APPENDIX A – EMERGENCY RESPONSE PLAN**

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