



# **DCN Drilling**

## **Drilling and Geotechnical Drilling Specialist**



**Site Specific Work Plan**

**(Insert Project Details Here)**





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## 1. INTRODUCTION AND SCOPE OF WORK

This Site Specific Work Plan is to be read in conjunction with the overarching DCN Drilling HSE-01 Health and Safety Management Systems Manual. This plan details the specific requirements for works being undertaken for the following Project:

(Insert Project Scope Here)

The Site Specific Works Plan shall be available at the job site and agreed to by the Client Representative and the Driller.

## 2. DCN DRILLING TEAM AND CONTACT DETAILS

Name	Position	Contact	Site Safe Induction	First Aid Trained
Dave Penney	Director / Manager	0274 735 011	✓	✓

## 3. PROGRAMME OF WORKS DETAILS

Item	Requirement	Responsibility / Details	Comments
1	Client		
	Client Job Supervisor Contacts	Name: Mob:	
2	Project Owner		
3	Work Site PCBU		
4	Traffic Control Plan (Responsibility)	Yes No ✓	
5	Site Specific Inductions	On Site to be confirmed by Client.	
6	Start Date		
7	Progress Update (required Y/N)		
8	Finish Date		



Item	Requirement			Responsibility / Details	Comments
9	Underground Service Locator Required	Yes	No		
	Details:				
	Underground Service Plans Available	Yes	No		
	USL Marked Out on Ground	Yes	No		
Details: DCN Drilling SOP-101 Underground Services Identification is to be applied.					
10	Hand Clearing Required	Yes	No		
	Details: DCN Drilling SOP-101 Underground Services Identification is to be applied.				
11	Overhead services	Yes	No		
	Details:				
12	Specifications:				
	Details:				
13	Pre-start Meeting & Safety Checks:			DCN Driller, Offsider, Client Supervisor & Other personnel working on Drill Site.	
	<ul style="list-style-type: none"> <li>• Daily Hazard ID</li> <li>• Rig Inspection</li> <li>• Emergency Information</li> <li>• Services Identified</li> <li>• Driller / Client sign off</li> </ul>				
Details: To be completed on DCN Drilling Daily Hazard ID, Rig Inspection & Emergency Information Form.					
14	Standard Operating Procedures			DCN Drilling SOP-100	
				Client to advise any specific	
Details: DCN Drilling SOP 100 – Rigging Up and Drilling Operations					
15	Additional Job Hazard Analysis Required				
	Mandatory Job Specific JHA	Yes	No		



Item	Requirement			Responsibility / Details	Comments
	Driller / Client Rep decision if additional JHA required based on risk.	Yes	No		
	Details: For high risk works a Mandatory Job Specific JHA will be required and stipulated prior to commencement of works. For routine drilling works where existing SOP's & JHAs are in place, the site based Driller and Client Representatives make the decision if the works require a site specific JHA based on risk.				
12	Sampling (bulk samples, core samples, push tubes). Sampling specifications.				
13	Testing Intervals				
14	Backfilling requirements				
15	Waste Disposal and Transport				
16	Water Management				
17	Other Requirements				
	Detail:				

#### 4. DRILL RIGS AND EQUIPMENT

DCN Drilling Ltd drill rigs and equipment are fit for purpose, maintained in safe operating condition, have been issued with required license and certification, have the required safety features and be operated by competent operators.

The following equipment will be utilised on site:

- Drilling Rig (tractor mounted or similar)
- Water Supply Pump, hoses and all necessary tooling to complete the drilling
- Drillers Transport (Truck or similar)
- Vehicle or 4X4

Daily pre-start checks are completed prior to commencement of works. Defects are reported and rectified as part of the maintenance program or immediately if the defect poses a risk to health, safety or the equipment.



### 5. PROJECT MOBILISATION MEETING & SITE SPECIFIC WORK PLAN SIGN OFF

A project mobilisation meeting is carried out with the Driller, Offsider and Client Representative prior to commencement of works, key focus of the meeting is to:

- Establish Client contacts and communication forums
- Discuss site layout and work environment
- Finalise HSE requirements, systems and processes
- Review equipment and materials site access requirements
- Review Environmental requirements
- Formalise reporting requirements
- Confirm working hours and rosters agreements

**Project Site Specific Work Plan Complete to the satisfaction of Client Representative and DCN Site Drill Crew:**

Client and DCN Drilling Approvals			
Name	Position	Signature	Date
	DCN Drilling Driller		
	DCN Drilling Offsider		
	Client Representative		
	Client Representative		
	Other:		



## 6. SCHEDULE 1 GENERAL REQUIREMENTS

### 6.1. STANDARD OPERATING PROCEDURES

Standard Operating Procedures are adopted for drilling works, specifically SOP-100 Rigging Up and Drilling Operations is applied to ensure safe drilling practices are in place, this procedure includes requirements for the following.

#### 6.1.1. IDENTIFICATION AND DETECTION OF UNDERGROUND SERVICES

If there are potential for underground services at the drill site, then the SOP-101 Underground Services Identification Procedure shall be applied, this procedure includes requirements for:

- Use of competent Underground Service Locator to identify underground service locations
- Identification, detection and location mark up of underground services on the ground at the drill site
- Approvals and permits from the service providers of the underground services if works encroaches on the close approach distance
- All services to be visually exposed prior to any drilling operations being undertaken
- Hand clearing to be carried out to a minimum depth of 1.5m

Further detail on these procedures can be found within SOP-101 Underground Service Identification Procedures.

#### 6.1.2. RIGGING UP

Drill crews ensure the drill site is well prepared prior to driving machinery or equipment onto the site, checks are to be made to ensure:

- Ground is stable and can take the weight of the rig
- Debris or long grass is cleared from the site
- There are no overhead power lines in close proximity to work site
- Checks are undertaken to identify locations of any underground cables, water pipes, gas pipes or sewers
- All power lines are considered live and dangerous until it has been established they have been isolated, works are not to commence within close proximity to power lines without a close proximity permit
- Site access and egress is safe, with suitable road conditions, appropriate site entry and adequate clearance from other traffic.

On successful completion of drill site clearance the following procedures are followed to ensure appropriate rig set up:

- The drill rig is only moved and positioned with mast in the lowered position for travelling
- Ensure all crew members and other personnel are clear of the rig before start up
- Level the rigs with the stabilising jacks, ensure the rig is stable and cannot move
- Carry out checks on loose items, such as overshots or hoisting equipment and ensure they are secured and cannot snag or drop out
- Ensure all hydraulic hoses and wire ropes are clear before raising the mast
- When the mast has been raised to the required position, ensure that retaining pins and backstays are security and safety attached or locked in place
- If required use geotextile matting or plywood to protect grassed areas
- Arrange for the safe disposal of excess water, drilling mud spilled fuel and lubricants and arrange mud pits out of the direct rig working area



- Safely position any auxiliary equipment, such as cyclones and mud mixing plant and stabilise rod racks and trestles
- Whilst drilling on barge ensure the water is recirculated to ensure there is no dirty water going back into the tide.
- Ensure drill site has appropriate warning signs and cones erected securing the site and informing of no unauthorised access

### 6.1.3. DRILLING OPERATIONS

Site Drillers are to ensure all crew members are familiar with the associated hazards with drilling operations and ensure the following precautions are undertaken during drilling operations:

- When rods, casings or drill pipes are being raised or lowered, exercise care to ensure that the hoist plug or rotation head sub is screwed in, before taking up the weight
- When running into the hole be sure that the joint being added is properly screwed in, before lifting out of the clamp or spanner
- When drill pipe is being added to the string or removed on the way out of the hole with a hook and clamshell being used ensure, before you start tripping, that the cable is in good condition. Also ensure that the cable clamps are on correctly and adequately tightened and that both the hook and clamshell are correctly in place before taking the weight of the pipe joint
- Ensure that rods/pipe/casing are firmly set in the clamp or spanner before trying to break the joint
- Operate retaining tools, such as rod safety clamps and rod spanners with care and do not allow them to come into contact with rotating tools
- Take caution when making or breaking joints and do not place any part of the body between stilsons, tongs or break out spanners and the drill mast
- When using stilsons or tongs, ensure they are set correctly and avoid burring of drill pipe and casing. If burrs do occur, file them off immediately to ensure there is safe placement for hands when handling rods and to ensure clothing cannot be snagged on rotating pipe
- When breaking the bit from the hammer, always use slips to hold rods in place and a bit basket to hold the bit
- When handling rods, do not place hands or fingers inside the threads as they can become sharp and may result in laceration injuries
- Avoid touching hot rods with bare hands
- Stack tubular goods in an orderly and secured manner, take caution when handling to avoid them rolling and catching fingers
- Check the hoist plug or hook and clamshell and all water/air/sample swivels on a regular basis, ensure they are operating properly and are lubricated as required
- Climbing of the mast while the rig is operating is prohibited, if climbing the mast is necessary, this shall only be done so when the motor is stopped and a safety belt and lanyard is used to avoid slipping or falling
- Always replace guards over all chains, belts and gears if they have been removed to carry out repairs
- Operate the rig controls from a stable and convenient position
- Do not carry out mechanical work on machinery that is in operation and keep hands away from live winch cables. Never straddle cables that are being used for hoisting or pulling
- Ensure that chains, bearings and lever on the wireline winch are kept clean and that they are lubricated regularly





- When running wireline take caution that the rope does not form a loop that could go around an arm or neck of crew members
- When pulling the inner tube, pull steadily and be ready to stop, be alert for a hang up that could break the wireline
- Do not try to handle the inner tube until it has come to a complete halt and stabilised at the collar
- To take core from a core barrel, lay it across the trestles, extract the inner tube and then remove the core. Never try to remove the core from a core barrel suspended on the hoist plug
- For wireline barrels, remove the inner tube head assembly before removing core. Never try and remove core while the inner tube is hanging on the overshot. Use two inner tube assemblies
- Do not place an unprotected hand over the end of an inner tube when removing core as this could cause injury
- Do not stand in front of the inner tube when pumping out split inner tube or core from a triple tube core barrel with mud or water. Never use air to pump them out as they can become dangerous projectiles
- When geotechnical drilling do not hold sample tubes by the cutting edge as this is sharp
- When drilling use the pit provided to drill through as so the drilling fluid can be recirculated
- When heating wax for wax impressions use the heating equipment with care and try not to spill hot wax
- When the SPT hammer is in use, never place hands on the guide rod or anvil. Keep well back from the equipment when SPT tests are being carried out
- Maintain the working parts of an automatic trip hammer clean and well lubricated
- In the event of a diesel or oil spill, the rig spill kit used to soak up the spill. Used spill kits are disposed of in an approved waste site
- When nearing the end of the borehole try to use all the recirculated water up so there is no spillage on to the ground
- Empty the pit of drill cuttings and excess water down the drill hole

#### 6.1.4. ADDITIONAL PROCEDURES

Additional steps, procedures and hazards may be included here where appropriate for site specific tasks.

STEPS	PROCEDURE	Additional JHA Required
1.	•	
2.	•	
3.	•	



STEPS	PROCEDURE	Additional JHA Required
4.	<ul style="list-style-type: none"><li>•</li></ul>	

## 6.2. CHEMICAL APPROVALS

DCN Drilling Ltd have an associated Safety Data Sheet (SDS) which details the safe use, precautions and chemical properties of any substance and can be obtained via e-mail.

## 6.3. TRAFFIC AND MOBILE PLANT MANAGEMENT

Traffic and mobile plant management hazards are considered at each Project Site including:

- General road safety and rules
- Speed limits in prescribed areas
- Rights of way on roads, intersection and roundabouts
- Procedures for breakdown and recovery
- Loading areas
- Procedures for loads and escorts
- Parking that includes minimising the risk of runaways on grades
- Separation of drilling operations and light vehicle parking areas
- Restricted access
- Overhead power lines
- Windrows and road markers
- Lighting and lighting plants
- Stock management, gates and notifications

## 6.4. SMOKING IN WORK PLACE

Smoking is not permitted in any enclosed or partially enclosed workplace building or in company vehicles. Site inductions will inform staff of relevant requirements for that site.

## 6.5. ALCOHOL, DRUGS AND OTHER MEDICATION

Alcohol and illicit drugs are not permitted on site, with the requirement that personnel attending site must present in a fit state to perform their required duties. Random testing may be undertaken.

Personnel must not be under the influence of alcohol or illicit drugs whilst on site.

Personnel on prescribed or over the counter medication that could impact on their ability to perform their duties, must inform the on-site Supervisor of their potential impairment, to allow a risk assessment of the situation prior to work commencing.

## 6.6. FIRE EQUIPMENT

All DCN Drilling Ltd rigs and support vehicles are fitted with firefighting equipment and are regularly maintained, inspected and where required serviced. Daily inspections of fire equipment are included within the Drill Rig Pre-start Inspection.

All DCN Drilling staff are instructed in basic firefighting as part of the competency based training program.



Drill crews must familiarise themselves with the location of other firefighting equipment on Client sites, this is generally undertaken during site specific induction.

Any fire equipment found to be defective is reported to the Site Supervisor and replaced as soon as possible. All fire incidents and activation of firefighting equipment are reported and investigated on the Accident Incident Investigation forms.

### **6.7. FIRST AID**

First aid kits are located in all DCN Drilling Ltd vehicles and are maintained and inspected monthly. Use of these kits must be reported to Site Supervisor.

All injuries must be reported to Supervisor and all first aid treatment must be recorded on the sites injury reporting form.

DCN Drilling Ltd ensure basic first aid training is undertaken by an appropriate selection of nominated employees.

Emergency assistant can be obtained by using the site emergency information form.

### **6.8. HOUSE KEEPING**

DCN Drilling crews have been instructed and are familiar with requirements of maintaining good housekeeping both during operations and following completion of works including:

- Disposal of wastes in compliance with site / clients procedures
- Spill clean ups and decontamination
- Importance of protection of water ways from contamination
- Appropriate placement of mud pits
- Effective drill site clearance and set up reducing safety and environmental harm

Drill site housekeeping forms part of the weekly and monthly inspection program.

### **6.9. AREA SPECIFIC HAZARD**

Daily hazard identification forms must be completed and signed off by all relevant personnel. When high risk activities are identified during daily hazard identification the Driller and Client Representative will instigate a site specific JHA to ensure additional controls are implemented.

### **6.10. PERSONAL PROTECTIVE EQUIPMENT**

DCN Drilling Ltd shall ensure all employees are supplied with relevant personal protective equipment (PPE) for the task they are required to perform.

Employees are required to wear basic PPE whilst in operational works areas these include:

- Steel capped safety boots
- Hearing protection
- Protective eyewear
- Overalls
- Hard hats

PPE must be worn in accordance with the minimum requirements.

**Safety Hard Hats** (complaint with AS/NZS 1800)



- To be worn in all areas
- Except when inside enclosed vehicles, offices, and control or lunch rooms.

**Safety Footwear** (compliant with AS/NZS 2210.2)

- To be worn in all areas.

**Hearing Protection** (compliant AS/NZS 1269)

## Exemption

- Only where required by site, and for tasks at elevated noise levels e.g. grinding etc.

**High Visibility Clothing** (compliant AS/NZS 4602: 1999)

- To be worn in all areas of the site.
- Long sleeve, ankle to wrist cover.

**6.11. REPORTING WORKPLACE OSH & ENVIRONMENTAL INCIDENTS**

DCN Drillings Ltd accident incident reporting and investigation systems requires all safety and environmental incidents and hazards to be reported and investigated. Drill Supervisors are instructed in the accident incident reporting and investigation system which includes requirements for:

- Reporting of serious events directly to DCN Management
- Reporting of incidents to the client representative and principal
- Use of the accident incident investigation forms and records
- First incident response
- Controls to prevent recurrent or escalation of the incident/hazard

HSE-10 Accident / Incident Reporting Forms are available in all DCN Drilling Ltd – Drill Rig HSE Folders located on each rig.

Statutory reporting requirements are completed by DCN Drilling Ltd Management, in consultation with the Client Representative.

Client site specific emergency procedures are adopted by DCN Drilling Ltd as appropriate.

**6.12. ADDITIONAL ON SITE HEALTH AND SAFETY DOCUMENTATION**

- Daily hazard identification
- Generic site hazard register
- Incident/accident reports
- Daily toolbox safety meeting sheets
- Safe operating procedures booklet



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