

Document Owner: Manager Customer Planning

Hydro Vacuum Excavation

Procedure for excavating using a hydro vacuum excavator. This method of excavation is commonly accepted as being equivalent or safer than hand digging within the 'close approach distance' around underground services.

Health & Safety and Operational Information

Hazard Indicators



Personal Protection



Health and Safety Information

- Risk Control Plan (RCP)
- WWL Health and Safety documentation/policies
 - o HSEP_0004 - Excavation Safety Process
 - o **WWL – Water Ways - Underground Services**
- Operator manual
- Generic Traffic Management Plans or site-specific Traffic Management Plan
- Hazardous Wates
- Confined Space Entry

Operation's & Maintenance Documentation

- Corridor Access Requests (CAR) and WAP Permits (site specific or generic/global)
- Service plans (B4uDig)
- Design drawings
- Site plans
- Notification Calling Cards
- Safety Fencing of Worksites Policy

Customer Information (Confidential)

- Vulnerable customers (DHB supplied list)
- Priority customers (WWL)

Priority Customer Categories

- Schools and Child Care
- Commercial premises
- Hospitals
- Retirement Homes/Villages
- Correction Facilities
- Military Installations
- Cafes, restaurants, takeaways, bakeries
- Processing industries

Emergency Procedure / Escalation

Emergency

- In event of service strike to utility/energy source (e.g. fuel, Gas, Power, Water etc.) report immediately to team leader.
- Make "Site Safe" and isolate risks to people or property with resources at hand.
- In the event of a water jet injury, present medical alert card at hospital

If Asbestos is suspected (as part of other works)

- Report findings to Team Leader. Only proceed with repairs if required PPE, equipment and Asbestos trained personnel are on-site.

Escalate if extra resources required or problems occur!

- Escalate to Team Leader and inform of the issues faced and/or expected resources required if necessary.

Additional Documentation

- **Wellington Water**
 - o [Water Ways Guide - Overhead Lines Poles](#)
 - o [Water Ways Guide - Parking On Slopes](#)
 - o [Water Ways Guide - Asbestos Cement Pipe](#)
 - o Excavation and Trenching - Maintenance Procedure

Required Skills, Competencies (Qualifications and/or Certifications)

- Competent persons only – Hydrovac Trucks CTO
- Asbestos Awareness Training

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Standard Operating Procedure

Required Equipment

Equipment and Information	Details
Fully Equipped Vehicle	Ensure vehicle, plant, equipment, and materials appropriate to the day's work schedule is available
Specialist Personal Protection Equipment	<ul style="list-style-type: none"> Sealed Eye Protection - Closed cell foam seal to provide added protection against dust and small particles Electrical Hazard Resistant Boots and Gloves
Specialist Materials & Parts	Ensure you have loaded up all the required parts and materials required to undertake the work to be completed

Prepare to do the work

Action	Action Details
Pre-Start Process	Complete the Daily Pre-Start - Planning Reactive Maintenance <ul style="list-style-type: none"> Include Plant Pre-start checklist Include Hazard ID/Risk Control Plan (RCP) Include Pre-start/Tailgate Meeting Include Utility Service Plans/Service Mark-out
Pre-Start Process	Obtain all necessary permits and approvals before commencing work. <ul style="list-style-type: none"> Digging and Excavation Permit Close Approach Permit Work Access Permit
Compliance	Traffic Management Plan - Where required, TMP to be in place prior to work starting. TMP to be accessible on site.
Training	Persons Authorised to operate the Hydrovac and Competent Support Personnel

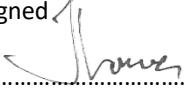


Perform the work

Action	Trade	Action Details
Health & Safety	Serviceperson	Undertake all tasks required in the Pre-Start
Health & Safety	Serviceperson	Complete and obtain all permits and approvals
Operation	Serviceperson	Undertake a pre-start inspection of the Hydro Vacuum Unit <ul style="list-style-type: none"> Include reels, hoses and hand pieces are in good working order, free from degradation, cuts, burrs, and leaks Include visual engine check - mounts, wiring, piping, exhaust, and no leaks Include visual overall checks for cracks, deformation, or excessive rust
Operation	Serviceperson	Ensure work area is appropriate for hydro excavation <ul style="list-style-type: none"> Assess ground conditions/work area is suitable for hydro excavation Ensure effectively delineated and all traffic is being managed appropriately Installed appropriate guards/barriers around the work area as required Check the work area is clear of obstructions/trip hazards/overhead services
Operation	Serviceperson	Confirm all necessary PPE is available on-site and used
Operation	Serviceperson	Position the Hydro-vac truck in appropriate location <ul style="list-style-type: none"> Ensure the internal combustion engine has adequate ventilation and consider wind direction
Operation	Serviceperson	Hydro-vac Operator and Supporting Personnel will hook up the Hydro-vac hoses and nozzle onto the Hydro-vac truck according to the manufacturer recommendations
Operation	Serviceperson	Before turning on Hydro-vac engine, ensure: <ul style="list-style-type: none"> The Hydro-vac operator and support personnel are positioning to be able to communicate, at all times The idle switch is down, and water feed is turned off The Hydro-vac suction hose nozzle is clear of any obstructions or loose material
Operation	Serviceperson	Turn on water feed while engine is at idle and ensure water pressure is appropriately set

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Excavation	Serviceperson	Continually monitor and check ground conditions during excavation process - Maintain good posture and safe work procedures - Maintain communications between operator and support personnel
Health & Safety	Serviceperson	Do not use high pressure water(above 50psi) on Asbestos Pipe
Health & Safety	Serviceperson	If excavation depth is approaching 1.5m and is expected to continue beyond 1.5m, all excavating will stop until Section 2: Digging and Excavation Permit has been completed
Operation	Serviceperson	After excavation is complete: - Clean down unit, if necessary - Ensure work area is clean and any debris is removed
Operation	Serviceperson	Stow away all hoses, equipment, and components safely and securely. Ensure all locking pins are in place
Operation	Serviceperson	Dump spoil and fill water tanks before end of shift
Removing Blockage		
Identified by water exiting the suction hose and loud chirping sound from release valve		
Operation	Serviceperson	Communicate with support personnel that there is a blockage and confirm understanding
Operation	Serviceperson	Ensure Hydro-vac unit is shut off before attempting to remove the blockage
Operation	Serviceperson	Remove suction hose nozzle, check for a blockage, and remove - Use an appropriate tool to remove the blockage
Dumping Process		
Identified through sight glass and loud chirping sound from release valve		
Operation	Serviceperson	Ensure Hydro-vac truck is appropriate position and chocked as necessary before dumping
Operation	Serviceperson	Raise the Hydro-vac tank approximately 400mm - The Hydro-vac unit will need to be 'livened' but do not start the Hydro-vac unit engine
Operation	Serviceperson	Open both rear valves(top and bottom) from a safe position - Ensure that the area behind the unit are clear of equipment and personnel
Operation	Serviceperson	Turning on the Hydro-vac engine - Ensure the idle switch is down, and water feed is turned off
Operation	Serviceperson	From a safe position, close the top valve only - Ensure the bottom valve is free to drain the tank Open and close the top valve as required to maintain draining of the tank
Operation	Serviceperson	Once tank is empty, open the rear door - Ensure rear door is clear of personnel and equipment as it will swing open slightly
Operation	Serviceperson	Raise the tank fully, keeping clear of the rear door
Operation	Serviceperson	Using a suitable washdown gun, wash inside tank and rear door inner from a safe position outside of tank door opening - Ensure rear door rubber seal is cleaned and clear of debris
Operation	Serviceperson	Lower the tank fully and ensure rear door is closed and secured before moving the truck - Ensure rear door is clear of personnel and equipment as the tank is lower

Approved to Issue for Testing: Name: Jono Lowe	Tested by: Serviceperson Name John Pinckham	SOP Finalised: Team Leader Name Jon Manava
Signed 	Signed 	Signed 
Date 15/04/2024	Date 16/4/24	Date 16.4.24