

Document Owner: Manager Customer Planning

Clearing Wastewater and Stormwater Blockages

Scope/Purpose: Procedures for clearing blocked stormwater and wastewater gravity mains.

Health & Safety and Operational Information

Hazard Indicators

Personal Protection

- Health and Safety Information**
- Health and Safety documentation.
 - Generic Traffic Management Plans or site-specific Traffic Management plan.
 - Number of people
 - Confined space entry
 - Safety harness
 - Rescue tripod

- Operation's & Maintenance Documentation**
- Corridor Access Requests (CAR) and WIP
 - Permits (site specific or generic/global)
 - Design drawings
 - Site Plans
 - Notification Calling Cards
 - Service Plans (B4uDig)

Customer Information (Confidential)

Priority Customer Categories

- Emergency Procedure / Escalation**
- Make "Site Safe" and isolate risks to people or property with resources at hand
 - In event of service strike to utility/energy source (e.g. fuel, Gas, Power, Water etc.) report immediately to team leader

- Additional Documentation**
- Specialised equipment needed – Jetting trailer or Jetting/Vacuum truck (or Combi unit) with specialist jetting/cutting nozzles.
 - Client approved jetting pressures

- 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.

Required Skills, Competencies (Qualifications and/or Certifications)

Competent persons only -NZ Certificate in Infrastructure Works Level 3 or higher (or similar) with wastewater strand

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
Vulnerable & Priority List	List of potential Wastewater "Blow-Back" sites.
Specialist Equipment	Jetting trailer, Jetting/Vacuum trucks (or Combi truck) complete with jetting and cutting nozzles. Roding equipment and plungers. Gas detectors

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Prepare to do the work

Action	Action Details
Pre-Start Process	Complete the Daily Pre-Start, Choose appropriate TMP Use gas detectors if entering confined space. Record gas detector readings.
Initial site assessment	Is there also an associated discharge/overflow? HOLD POINT: If there is also discharge is to waterways (including piped stormwater systems and open stormwater drains) escalate as required and complete overflow notification Prioritise preventing further discharge to waterways.
Identify Blocked network to be cleared	Trace flow restrictions / blockages downstream to open free flowing network and upstream to determine location of blockage. Identify access manholes to be utilised to unblock network. Review catchment on GIS to ensure the understanding of the flow direction and for stormwater outlets locations.
Identify and action additional issues	If properties are flooded, have the potential to flood or suffer from wastewater overflow escalate these issues as appropriate. If service connection blockage suspected – see below
Notification	Inform affected properties of the blockage via door knock and / or letter drop. Arrange alternative service provision depending on nature of event and particular customer needs – discuss options with Planning Engineer

Perform the work

Action	Trade	Action Details
Clear blockage	Service person	If appropriate, install a debris trap at the downstream manhole. Using jetting lance as required with appropriate cutting head or drainage rods to remove blockage. If initial attempt to clear is unsuccessful mark blockage point on the surface at best estimated location. If necessary, mark upstream and downstream blockage extent points.
	Service person	Escalate the issue to your supervisor and request assistance as appropriate. This may involve calling in the CCTV unit, Jet/Sucker truck or Combi truck with larger jetting equipment on site. If structural damage/issues are discovered, assess if immediate excavation and repair or root cutting is required to remedy/repair and prevent further blockages and overflows from occurring
On clearance	Service person	Flush the mains pipes until adequate downstream flow is observed and all debris (Silt, Fats and other residues etc.) is removed at downstream manhole On completion of clearance operations replace all manhole covers and secure appropriately. Camera blocked section of pipe to verify that the pipe blockage area Pipe ID is >90% of pipe ID.
Clean up	Service person	All possible effluent and sludge shall be removed from the site. The affected area is to be thoroughly disinfected with Jeyes Fluid, hypochlorite solution and hydrated lime (as most suitable) for odour as appropriate. Chemicals to be used are to be approved for such use. A visual inspection of the site must be carried out to ensure NO effluent or sludge remains.
Effluent/ sludge removal	Service person	Dispose of all contaminated liquids, effluent, and sludge at the closest wastewater treatment plant
Confirm cause	Service person	If structural damage, siltation and/or root penetration is believed to have caused the blockage, request a CCTV assessment of the pipeline to enable accurate pipe failure assessment
Close Out	Service person	Record necessary details (e.g., number and type of customers affected) Ensure all PPE and tools are disposed of or sterilised with chlorine solution. Observe good personal hygiene.
Service connection blockage	Service person	Locate blockage and determine ownership and responsibility for maintenance. Check flow at upstream and downstream manholes, where there is no variance in the observed flow rates it can be assumed that the blockage is in a service connection.
	Service person	Once confirmed check adjacent properties to ensure they have flow, this will narrow down the blockage to the specific service connection and location. Where blockage is on private property, notify owner/resident and advise to engage a plumber/drain layer, if unable to contact, leave them a blocked connections card which explains this.