**A Task Analysis (TA) is used to assess the risks to health and safety for a specific task. You can identify hazards and risks and then choose controls (eliminate or minimise) to manage those risks. For more information refer to your HazardCo Resources.**

**General information:**

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| **PCBU name:** |  | **Completed by:** |
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| **Contact number:** |  | **Site address:** |
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**Reference documents:** This TA has been written using the latest NZ Legislation and industry guidelines

**Health and Safety at Work (General Risk and Workplace Management) Regulations 2016**

**Excavation Safety - Good Practice Guidelines (GBG) - 2016**

**NZTA’s Code of Practice (COP) for Temporary Traffic Management**

**Approved Code of Practice (ACOP) for Cranes - 2009**

**Approved Code of Practice (ACOP) for Operator Protective Structures - 1999**

**WorkSafe NZ Factsheet - Using Quick Hitches Safely**

**Prior to commencing any work on the worksite please ensure you have read and understood the Safety Procedures Section of your HazardCo resources. Ensure that the worksite is set up as per the Work Preparation Page.**

Please contact HazardCo on 0800 555 339 if you require any assistance to identify hazards or implement the required controls

**Hazard ID and risk management**

The following questions are task specific and will help identify if a particular hazard or risk is likely to be present during the task.

If you have answered yes to any of the questions below you must where possible eliminate (E) the risk, if you cannot do so then you must put in place multiple controls to minimise (M) the risk.

Below is a list of risk controls that are based on regulations, industry expectations and good practice guidelines (referenced on the front of this TA). The controls are listed from most effective to the least effective. Remember to monitor the effectiveness of your controls through on-going Site Reviews.

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| **Answer the following questions relevant to the task you are about to complete** | **Hazard/risk identified** | **Specify the risk controls you will use** |
| 1. **Could there be underground services or utilities in or near your excavation?** | ☐ Yes ☐ No | Contact with underground utilities resulting in injury, incident or death | ☐ Service owners will be contacted to identify all services likely to be on site prior to commencing the excavation (M);☐ Services will be located (using detection equipment if required) and marked out prior to starting work and where necessary isolated at the source (switched off) (M);☐ Service plans will be obtained and available on site (M);☐ Safe mobile plant access to the excavation site will be provided to ensure plant does not damage underground services eg drains, tanks etc (M);☐ Mechanical pilot holes will be dug to expose services (M);☐ Pilot holes will be hand dug until services are uncovered and supported (M);☐ Spotters will be used to spot services in the excavation (M). |
| 2. **Could pedestrians, passers-by or other workers gain unauthorised access to the excavation site?** | ☐ Yes ☐ No | Unauthorised entry to excavation resulting in injury, incident or death | ☐ Work boundaries will be marked and site fencing established to keep out unauthorised visitors (M);☐ Fencing will be suitably constructed and fit for purpose (in accordance with GPG and NZTA COP) (M);☐ Work areas will be fenced off from pedestrian areas **within** the worksite (M);☐ Clearly marked vehicle access, routes and drop off areas will be established and well-marked (M);☐ High-vis vest will be worn by all workers on site in the vicinity of mobile plant or vehicles (M);☐ Hazard and vehicle warning signage will be put in place on main entrances and plant operating areas (M);☐ Authorised visitors will be inducted to the worksite and escorted for the duration of their visit (M). |
| **Answer the following questions relevant to the task you are about to complete** | **Hazard/risk identified** | **Specify the risk controls you will use** |
| 3. **Will your work affect a road or normal operations of a road including the road reserve?** | ☐ Yes ☐ No | Public exposed to work site hazards resulting in injury, incident or death | ☐ A Traffic Management Plan (TMP) in accordance with the COP and approved by NZTA or the Local Authority will be required (M);☐ Traffic will be managed in accordance with our own internal traffic management plan (M); |
| 4. **Could you encroach on or come in contact with overhead power lines near your work (within 4m)?** | ☐ Yes ☐ No | Workers coming in contact with high voltage lines resulting in injury or death | ☐ Service owners will be contacted to de-energise high voltage lines prior to commencing work (M);☐ Service owners will be contacted to isolate high voltage lines using “tiger tails” or similar (M): ☐ All mobile plant, machinery and equipment will be kept a minimum of 4m clear of any high voltage lines unless authorised by services owner (M);☐ Spotters will be used while moving equipment (M);☐ Equipment will be moved by a competent operator only (M);☐ Emergency response procedures will be in place (M). |
| 5. **Could your excavation involve unstable or saturated soils? Could the soil become unstable through seismic or water activity?** | ☐ Yes ☐ No | Face collapse resulting in injury, incident or death | ☐ An engineer will conduct an investigation and geotechnical assessment prior to the start of any work (M);☐ A competent person will conduct an initial inspection of the soil to assess its stability (M); ☐ Excavations will not be conducted in heavy rain (M);☐ Adjacent structures ground support will be assessed prior to work starting (M); ☐ A dewatering plan is required and will be put in place (M);☐ Resource consent is required from the local authority (M);☐ Work access permit (permit to work system) will be in place for this work (M); ☐ An emergency plan will be prepared, maintained and implemented (M). |
| 6. **Will the excavation involve any hazardous conditions such as contaminated soils (asbestos, chemicals) or hazardous atmospheres (gases, engine fumes)**  | ☐ Yes ☐ No | Exposure to hazardous environments resulting in injury, illness or death | ☐ Soil and water testing will be conducted to confirm any contamination of the site (M);☐ The local authority will be contacted to ensure site is not on the Hazardous Activities and Industries List (M);☐ Atmospheres within the excavation will be tested prior to workers occupying the space and treated as a confined space if testing proves positive (M);☐ Forced ventilation and or appropriate PPE will be used (M);  |
| **Answer the following questions relevant to the task you are about to complete** | **Hazard/risk identified** | **Specify the risk controls you will use** |
| 7. **Will the excavated material be stored near excavation?** | ☐ Yes ☐ No | Excavation collapse resulting in injury, incident or death | ☐ All excavated or loose materials will be stored at least **1 metre** outside the “zone of influence” from the edge of excavation (M);☐ Excavation face will be specially shored with mechanical struts to allow for the increased loads adjacent to excavation (M);☐ Excavated materials will be stored on the downslope of the excavation (M);  |
| 1. **Will workers be working in the excavation?**
 | ☐ Yes ☐ No | Face collapse resulting in injury, incident or death | ☐ An engineer will conduct an investigation and geotechnical assessment prior to the start of any work (M);☐ Benching/battering of the excavation will be conducted to prevent collapse (M);☐ Shoring will be installed to protect workers from collapse (M);☐ Shields will be used to protect workers from collapse (M);☐ Non-essential persons will be kept clear of the excavation (M);☐ Regular inspections will be conducted by a competent person to assess the stability of the excavation (M);☐ An emergency plan will be prepared and implemented on site during the excavation work (M);☐ A trained and competent first aider and equipment will be available on site (M). |
| 1. **Will there be a risk of workers falling into an excavation or being struck by falling debris?**
 | ☐ Yes ☐ No | Workers exposed to being struck or falling into excavation resulting in injury or death | ☐ Excavations will be covered to prevent workers falling in (E);☐ Edge protection or fencing will be used around the excavation that can take the weight of a falling worker (in accordance with the GPG) (M);☐ Shoring will extend 200mm above the excavation to act as a toe board to prevent materials from falling into the trench (M);☐ Fall arrest or fall restraint systems will be used by workers (M);☐ Ladder or ramp access will be provided for all trenches under 1.5m deep (M)☐ Ladders or a stairway will be used for all trench access over 1.5 m deep (M);☐ Workers will wear hard hats to protect them from falling debris (M). |
| 1. **Could ground or surface water be present during the excavation?**
 | ☐ Yes ☐ No | Face collapse resulting in injury, incident or death | ☐ A dewatering plan will be in place for this excavation (M);☐ Surface water will be channelled away from the excavation (M); ☐ Local water sources will be isolated (M);☐ Sump pump will be used to remove ground water (M). |
| **Answer the following questions relevant to the task you are about to complete** | **Hazard/risk identified** | **Specify the risk controls you will use** |
| 11. **Will you be using Plant, Machinery or Equipment during this excavation?** | ☐ Yes ☐ No | Unsafe machinery and practices resulting in injury, incident or death  | ☐ All plant, machinery and equipment will be operated as per manufacturer instructions/relevant standards and by a competent person (M); ☐ All guards and operator protective devices, ROPS, FOPs and seatbelts will be in place and used (M);☐ Workload limits will be displayed and measuring devices operable (M);☐ Regular daily checks and maintenance will be carried out as per manufacturer’s instructions (M);☐ Excavators over 7 tonnes will have hose burst protection valves (M);☐ Plant, machinery and equipment will not be operated within 1m from the edge of an excavation (M);☐ All workers will be briefed on blind spots and how to gain safe access to plant, machinery and equipment (M);☐ Barriers will be used to isolate plant, machinery and equipment from non-essential workers (M);☐ A spotter will be used when operating plant, machinery and equipment (M);☐ Quick hitches will be used in accordance with WorkSafe’s Fact Sheet “Using Quick Hitches Safely” (M);☐ Correct PPE will be worn when operating or working near plant, machinery and equipment(M). |
| 12. **Will you be working at night or in poor lighting?** | ☐ Yes ☐ No | Workers exposed to being struck or falling into excavation resulting in injury, incident or death | ☐ Artificial lighting in trenches and open excavations will be used where there is insufficient natural light (M);☐ There will be no lone workers working at night (M);☐ Clear communication procedures will be in place (M). |
| 13. **Will materials be lifted by crane/forklift or similar?** | ☐ Yes ☐ No | Unsafe machinery and practices resulting in injury, incident or death  | ☐ Plant, machinery and equipment not specifically designed for lifting will not be used for load lifting unless certified by a chartered engineer (M); ☐ Only competent/trained staff will operate a crane/forklift (M);☐ Cranes and forklifts will be operated in accordance with appropriate ACOP (M);☐ Cranes and forklifts will have a current certificate of compliance or equivalent (M);☐ Lift plan in place for big or complex crane lifts (M). |
| **Answer the following questions relevant to the task you are about to complete** | **Hazard/risk identified** | **Specify the risk controls you will use** |
| 14. **Will you use ladders to access the excavation?** | ☐ Yes ☐ No | Falling from height resulting in injury or death | ☐ Ladders will not be used as a working platform (E);☐ Step ladders will not be used on site (E); ☐ Ladders will only be used for access and egress from the excavation work area (M);☐ Only commercial grade ladders rated to at least 120kg’s that comply with AS/NZS 1892, will be used (M); ☐ Regular maintenance checks and visual inspections will be done before using ladders (M);☐ Ladder Stability Devices (LSD) will be used to prevent slipping or lateral movement (M); ☐ Straight ladders will be set up using the 4 up 1 out method with 1m overlap on the trench edge (M); ☐ Maintain 3 points of contact at all times (M);☐ Tools will be carried on a tool belt while climbing and descending a ladder or lowered into the excavation (M);  |
| 15. **Could the excavation work create dust or airborne contaminants?** | ☐ Yes ☐ No | Exposure to hazardous environments resulting in injury, illness or death | ☐ Frequent watering, oiling or chemical spraying of haul roads and working areas will be conducted (M);☐ Dust masks or breathing apparatus will be provided to workers (M);☐ Health monitoring (lung function testing) will be in place for workers (M). |
| 16. **Will there be any hazardous substances on site (paint, fuel, gas, chemicals etc)** | ☐ Yes ☐ No | Exposure to hazardous environments resulting in injury, illness or death | ☐ Correct storage, signage, handling and disposal techniques for hazardous substances will be used (M); ☐ Certified handlers will be on site or available (M); ☐ PPE will be used as specified in Safety Data Sheets (SDS) (M);☐ Hazardous Substance Register and SDS’s will be available on site (M). |
| 17. **Will there be noise above 85dB during excavations?** | ☐ Yes ☐ No | High noise levels resulting in Noise Induced Hearing Loss (NIHL) | ☐ Noisy plant, machinery and equipment will be substituted for less noisy equipment (M); ☐ Non-essential persons or visitors will be kept clear of plant, machinery and equipment (M); ☐ Hearing protection will be used at all times and noise levels monitored (M);☐ Plant, machinery and equipment set up in enclosed spaces will be avoided (M);☐ Health monitoring (hearing testing) will be in place for workers (M). |
| **Answer the following questions relevant to the task you are about to complete** | **Hazard/risk identified** | **Specify the risk controls you will use** |
| 18. **Will your excavation be 1.5 metres or deeper and have a depth greater than the horizontal width at the top?** | ☐ Yes ☐ No | Workers being buried or engulfed due to a face collapse resulting in injury or death | ☐ The excavation will be shored, benched and/or battered as per GPG (M);☐ The face will be cut back (benching and battering) to a safe slope (M);☐ If shoring is impractical or unreasonable, other precautions will be taken to make the face safe (M);☐ WorkSafe will be notified 24hrs prior to the commencement if workers are working in the excavation (M). |
| **19. Is your excavation work classed as confined space work?** | ☐ Yes ☐ No | Workers being overcome or suffocated by toxic fumes resulting in injury, illness or death | ☐ Any confined space entry will be conducted in accordance with AS2865, WorkSafe Fact Sheet on Confined Spaces and notified to WorkSafe 24 hours prior to the commencement of any work (M).☐ Permit to enter system will be implemented (M);☐ The excavation will be tested by a competent person for safe oxygen levels and any toxic gasses before and during work (M);☐ Breathing apparatus will be available on site (M);☐ A standby person will be available at all times (M);☐ Only trained and competent workers will work in confined spaces (M);☐ Appropriate PPE will be worn at all times (M);☐ A confined space task analysis and entry permit document will be used (M);☐ Any confined space work will be notified in writing to WorkSafe 24 hours prior to commencement (M).☐ Forced ventilation and appropriate PPE will be used. |
| **20. Will there be truck/haulage movements to and from site delivering materials (soil) or removing demolished/excavated materials (spoil)?** | ☐ Yes ☐ No | Moving plant, machinery and equipment resulting in injury, incident or death | ☐ Only Inducted staff or subcontractors on site (M);☐ Experienced and licensed operators using machinery (M);☐ Licensed Truck drivers (M);☐ Monitor driving on site and set speed limit (M);☐ Traffic Management Plan (TMP) if required (M); ☐ Awareness of soft spots when tipping make sure ground is solid (M);☐ Use appropriate PPE (M); |
|  | ☐ Yes ☐ No |  | ☐☐ |

**Additional task information**

Add any additional hazards or risks that you identify for this task that are not listed above.

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| PPE required: |  | Signage required: |
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**Work method statement**

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| Describe how you plan to carry out the task by listing the step by step process eg 1. Arrive on site, 2. unload truck, 3. build scaffold etc. | Done |
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**Safety briefing**

You must conduct a safety briefing with all workers involved in this task. Explain the identified hazards and associated risks, the controls that will be put in place, and the proposed work method.

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| **Name:** |  | **Signature:** |
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| **Completed by:** |  | **Signed:** |  | **Date:** |
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