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| This permit is required to be completed:* Before commencing any mechanical excavation on a brownfield site *(refer notes on page 3 for brownfield site definition).*
* Before commencing any excavation to a depth of 300mm or more on a greenfield or brownfield site.
* Where a worker is required to enter an excavation or trench with a depth of 1.5m or more, or where there is a risk of engulfment due to poor ground conditions.
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| **Section 1 – Details of work (Permit Recipient to complete)** |
| Site name |  | Work Order # |  |
| Location on site |  |
| Details of work to be undertaken |  |
| Date of work |  | Planned finish date |  |
| **Section 2 – Excavation and trenching controls (Permit Recipient to complete)** |  |
| **2.1 Underground Service Location** (this section is mandatory before commencing excavation on a brownfield site) | **Yes** | **N/A** |
| All relevant plans and drawings have been reviewed, including Dial Before You Dig (ph 1100). |  [ ]  |  [ ]  |
| Physical inspection of the planned excavation site and surrounding area has been conducted to identify any visual indicators of buried services. |  [ ]  |  [ ]  |
| Unless the entire planned excavation will be completed by non-destructive methods (e.g. vacuum excavation / hand digging), the following service location requirements apply:***Note:*** *Additional service location requirements may be prescribed by asset owners (e.g. APA, Energex/Ergon Energy) when issuing DBYD plans or approving work near their high risk assets.*  |
| 1. Known services with potential to encroach within minimum **5m** of the planned excavation have been positively identified and clearly marked via non-destructive methods.

*Non-destructive methods may include vacuum excavation, cable locators, ground penetrating radar/technology, hand digging.**Refer notes on page 3 for underground service marking colour requirements.* |  [ ]  | [ ]  |
| 1. All services encroaching within minimum **300mm** of the planned excavation have been visually verified by potholing (vacuum excavation or hand digging).
 |  [ ]  |  [ ]  |
| 1. For Seqwater high-risk sites (such as Water Treatment Plants), the following extra precautions must be implemented.

*These precautions apply irrespective of whether plans/drawings have identified buried services near the planned excavation.** Precautionary slit trench around the perimeter of the planned excavation using non-destructive methods; **and**
* Precautionary assessment of the planned excavation using ground penetrating radar/technology.
 |  [ ]  |  [ ]  |
| Other precautions / comments: |

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| **HOLD POINT FOR MECHANICAL EXCAVATION** *(refer notes on page 3 for definition of mechanical excavation)* |
| ***Mechanical excavation cannot proceed on a Seqwater brownfield site until the Seqwater Work Coordinator*** *(or delegate)* ***has been consulted to confirm applicable service location requirements and isolations have been satisfied.*** |
| High Voltage, Hazardous Substances and High-Pressure (>87 psi / 600kpa / 6 bar) services have been isolated | Yes [ ]  |  N/A [ ]   |
| Consultation with the Seqwater Work Coordinator (or delegate) has occurred (record details below). | Yes [ ]  |
| Mechanical excavation has been authorised to proceed by site owner or delegate with knowledge of the excavation site and its complexity. | Yes [ ]  |
| Name of Seqwater Work Coordinator (or delegate) consulted | Position | Date & time of consultation |
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| **Comments:** |  |
| **2.2 Entry into excavation / trench deeper than 1.5m** [ ]  Not applicable |
| One or more of the following controls are mandatory to prevent ground collapse before a person can enter a trench/excavation deeper than 1.5m *(tick which control/s will be implemented):* |
| [ ]  | Benching (maximum bench height cannot exceed **1.5m** unless designed and certified in writing by a RPEQ engineer) |
| [ ]  | Battering (angle of repose must not exceed **45 degrees** unless designed and certified in writing by a RPEQ engineer) |
| [ ]  | Shoring / trench box |
| [ ]  | Written assessment from a RPEQ engineer warranting there is no risk of collapse |
| High Risk Work Rescue Plan ([TEM-00027](file:///K%3A/Q-Pulse/Docs/Active/TEM-00027%20Corporate%20Safety%20-%20High%20Risk%20Work%20Rescue%20Plan%20Template.DOCX)) developed. | **Y** [ ] mandatory |
| Safe entry and exit points confirmed (e.g. ladders at 9m intervals along the trench and protruding at least 1m above ground, ramps or steps used). | **Y** [ ] mandatory |
| Standby person / spotter is appointed and in place for the duration of the work. | **Y** [ ] mandatory |
| Risk of unsafe atmosphere within the excavation/trench identified and controlled (e.g. controls in place for use of chemicals or exhaust-emitting plant/equipment in or near the excavation). | **Y** [ ]  **N/A** [ ]  |
| *Additional risk controls, instructions or information:* |
| **2.3 Falls into excavation / trench** |
| Controls in place to prevent people or objects falling into open excavation/trench (e.g. barricades, signage, spotters etc.) | **Y** [ ]  **N/A** [ ]  |
| Heavy loads not positioned within the zone of influence of an excavation/trench*(Setback distance at least equal to the depth of unsupported trench wall).* | **Y** [ ]  **N/A** [ ]  |
| Controls in place to prevent persons from entering a section of excavation/trench where there is a risk of harm from plant falling into the occupied area. | **Y** [ ]  **N/A** [ ]  |
| **2.4 Work environment** |
| Controls in place to maintain exclusion zone around overhead electrical lines, including use of spotter: | **Y** [ ]  **N/A** [ ]  |
| Is there potential for the planned excavation/trench to impact stability of buildings or structures? orIs specialist engineering advice needed to manage risks arising from poor ground conditions? *(refer notes on page 3 for guidance on poor ground conditions)* | **Y** [ ]  **N/A** [ ]  |
| If **YES**, written assessment by a RPEQ engineer is required before proceeding. |
| Name of engineer: |  | Date written assessment received |  |
| **2.4 Work environment (continued)** |
| An environmental assessment is required due to:[ ] contaminated land [ ]  acid sulphate soil [ ] fire ants [ ] work in a waterway or coastal area [ ] Vegetation Protection Order in place [ ] cultural heritage [ ] other: | **Y** [ ]  **N/A** [ ]  |
| Overland water management controls have been implemented. | **Y** [ ]  **N/A** [ ]  |
| Sedimentation management controls have been implemented. | **Y** [ ]  **N/A** [ ]  |
| Dust management controls have been implemented. | **Y** [ ]  **N/A** [ ]  |
| **2.5 Other controls** |
| SWMS prepared for excavation/trenching activity | **Y** [ ] mandatory |
| Minimum separation distance to be maintained between services and mechanical digging components such as buckets, augers or similar attachments:* **500mm** separation from known live high-risk services (if exempt from mandatory isolation)
* **300mm** separation from known isolated high-risk services and live LV electricity.

***Note:*** *A greater separation distance and additional controls may be prescribed by asset owners (e.g. APA, Energex / Ergon Energy) when issuing DBYD plans or approving work near their high risk assets.* | **Y** [ ]  **N/A** [ ]  |
| Spotter to be used at all times during mechanical excavation in brownfield areas. | **Y** [ ]  **N/A** [ ]  |
| **2.6 Excavation diagram** |
| Sketch of the planned excavation to include details of area to be excavated, identified services, positive identification zone, potholing zone and any additional precautions for high-risk sites, set-back distance for heavy loads etc.This diagram should be updated to include any previously unidentified services discovered during the excavation work. |
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| **Section 3 – Verification of risk controls (Permit Recipient to complete)**  |
| I confirm that actions and risk controls required in Section 2 have been implemented for the work to be undertaken as described in Section 1. Workers involved in this work have been advised of, and understand, the requirements and risks of this work.*Note: This permit is activated at the time that the Permit Recipient completes and signs below and is valid for the period of work defined in Section 1.* |
| Permit recipient name |  | Signature |  |
| Date |  | Time |  |

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| **Section 4 – Completion of work (Permit Recipient to complete)** |
| I confirm that the work defined in this permit has been completed in accordance with the requirements of this permit. All spoil, plant, tools and equipment have been removed from the work area and the work area has been left in a safe condition.Appropriate sediment management controls are in place to manage sediment release from any soil disturbance associated with the work defined in this permit. |
| Permit recipient name |  | Signature |  |
| Date |  | Time |  |

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| **Notes** |
| * *High risk sites include Water Treatment Plants (WTPs) and other Seqwater sites/areas where the type or complexity of underground services presents a serious risk to safety or supply of essential services*
* **Brownfield Sites** are defined as [land](http://en.wikipedia.org/wiki/Real_property) currently or previously used for [industrial](http://en.wikipedia.org/wiki/Industry) purposes or some commercial uses. It includes any land that is not a greenfield site. Brownfield sites have greater risks of the presence of underground services or contaminated soils. Where there is uncertainty regarding the classification of a worksite, the area should be treated as a brownfield site.
* **Greenfield Sites** are defined as undeveloped land in a city or rural area either used for agriculture, landscape designs, or left to evolve naturally and which is free of underground services or contaminated soils.
* **Mechanical excavation** includes excavation/digging undertaken using powered plant such as excavators, backhoes, direction drilling equipment, augers or similar attachments. Mechanical excavation does not include the use on non-destructive methods such as vacuum excavation.
* **Poor Ground Conditions** are defined as ground conditions where there is an increased risk of collapse due to previously dug soil, the existence of filled land, presence of groundwater or sand. Advice from a RPEQ engineer should be sought where poor ground conditions warrant specialist advice to assess ground stability and determine safe work methods.
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| **Underground service marking colour requirements:** |

| **Service**  | **Tape colour** | **Service**  | **Tape colour** | **Service**  | **Tape colour** |
| --- | --- | --- | --- | --- | --- |
| Gas | Yellow | Fire Services | Red | Recycled Water | Purple |
| Water | Blue | Sewerage | Cream | Electricity | Orange |
| Communications | White | Petroleum Products | Brown |