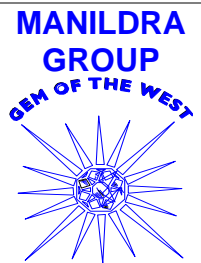


Manildra Group Safety - Form

Excavation, Trenching and Ground Penetration Permit



This permit is required to be completed:

- Before commencing any excavation or ground penetration on a brownfield site (*refer notes on page 4 for brownfield site definition*).
- Before commencing any excavation or ground penetration to a depth of 300mm or more on a greenfield.
- 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.
- Any work within 15m of the gas pipeline markers for the high-pressure gas main easement. Approval from Verbrec is also required. (Contact the Verbrec Control Room on 07 3020 2610). (*Refer Section 5*)

Section 1 – Details of work (Permit Recipient to complete)

Site name		Purchase 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)

All relevant plans and drawings have been reviewed, including Before You Dig Australia (BYDA) for work on/under public roads, footpath areas, Endeavour switch rooms and sub-stations.	Y <input type="checkbox"/> mandatory
Physical inspection of the planned excavation site and surrounding area has been conducted to identify any visual indicators of buried services such as Gas, Water, Electricity, Sewer etc.	Y <input type="checkbox"/> mandatory
<p>Unless the entire planned excavation will be completed by non-destructive methods (e.g. vacuum excavation / hand digging), the following service location requirements apply:</p> <p><i>Note: Additional service location requirements may be prescribed by asset owners (e.g. Telstra, Jemena, Endeavour Energy) when issuing BYDA plans or approving work near their high risk assets such as Switch rooms and Sub Stations</i></p>	
<p>a) Known services with potential to encroach within minimum 5m of the planned excavation have been positively identified and clearly marked via non-destructive methods.</p> <p><i>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.</i></p>	Y <input type="checkbox"/> N/A <input type="checkbox"/>
<p>b) All services encroaching within minimum 300mm of the planned excavation have been visually verified by potholing (vacuum excavation or hand digging) and will be excavated with non-mechanical means.</p>	Y <input type="checkbox"/> N/A <input type="checkbox"/>
<p>c) <u>One or more</u> of the following extra precautions must be implemented (tick which has been applied). <i>These precautions apply irrespective of whether plans/drawings have identified buried services near the planned excavation.</i></p> <p><input type="checkbox"/> Precautionary slit trench around the perimeter of the planned excavation using non-destructive methods; or</p> <p><input type="checkbox"/> Precautionary assessment of the planned excavation using ground penetrating radar/technology.</p>	Y <input type="checkbox"/> N/A <input type="checkbox"/>

Services identified within **5m** of planned excavation – (List Services):

Specified controls and precautions:

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HOLD POINT FOR MECHANICAL EXCAVATION (refer notes on page 4 for definition of mechanical excavation)

Mechanical excavation cannot proceed on a brownfield site until the Manildra Supervisor has been consulted to confirm applicable service location requirements have been satisfied.

Consultation with the Manildra Supervisor/Engineer has occurred (record details below). Y

Mechanical excavation has been authorised to proceed. Y

Name of Manildra Supervisor consulted:

Signature:

Date & time of consultation: / / : am / pm

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 Civil/Geotechnical engineer)
- Battering (angle of repose must not exceed **45 degrees** unless designed and certified in writing by a Civil/Geotechnical engineer)
- Shoring / trench box
- Written assessment from a Civil/Geotechnical engineer warranting there is no risk of collapse

High Risk Work Rescue Plan 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
Name(s):.....

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.) *Note: handrails must be fixed to top of shoring/trench box.* 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 (e.g. plant maintain 3 metre clearance, flagging, use of spotter, etc). Y N/A
Spotter name(s):

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Is there potential for the planned excavation/trench to impact stability of buildings or structures?; or Is specialist engineering advice needed to manage risks arising from poor ground conditions? <i>(refer notes on page 4 for guidance on poor ground conditions)</i> If YES , written assessment by a Civil/Geotechnical engineer is required before proceeding. Name of engineer: _____ Date written assessment received: / /	Y <input type="checkbox"/> N/A <input type="checkbox"/>
An environmental assessment is required due to: <input type="checkbox"/> contaminated land <input type="checkbox"/> acid sulphate soil <input type="checkbox"/> fire ants <input type="checkbox"/> work in a waterway or coastal area <input type="checkbox"/> Vegetation Protection Order in place <input type="checkbox"/> cultural heritage <input type="checkbox"/> other:	Y <input type="checkbox"/> N/A <input type="checkbox"/>
Overland water management controls have been implemented.	Y <input type="checkbox"/> N/A <input type="checkbox"/>
Sedimentation management controls have been implemented.	Y <input type="checkbox"/> N/A <input type="checkbox"/>
Dust management controls have been implemented.	Y <input type="checkbox"/> N/A <input type="checkbox"/>
2.5 Other controls	
JSEA / SWMS prepared for excavation/trenching activity	Y <input type="checkbox"/> mandatory
Minimum 300mm separation distance to be maintained between any live buried service and mechanical digging components such as buckets, augers or similar attachments. <i>Note: A greater separation distance and additional controls may be prescribed by asset owners (e.g. Telstra, Endeavour Energy, Verbrec) when issuing BYDA plans or approving work near their high risk assets.</i>	Y <input type="checkbox"/> N/A <input type="checkbox"/>
Spotter to be used at all times during mechanical excavation in brownfield areas.	Y <input type="checkbox"/> mandatory

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	

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

- **Brownfield Sites** are defined as land currently or previously used for industrial 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 Civil/Geotechnical Engineer should be sought where poor ground conditions warrant specialist advice to assess ground stability and determine safe work methods.

Underground service marking colour requirements:

Service	Tape colour	Service	Tape colour	Service	Tape colour
Gas	Yellow	Fire-fighting	Red	Reclaimed Water	Purple
Water	Green	Sewerage	Cream	Electricity	Orange
Communications	White				

Section 5 – Excavation over high pressure gas pipeline (this section is mandatory before commencing excavation within 15m of gas pipeline markers)

Minor Works Approval

Minor Works are works:

- Where works over the pipeline are less than 300mm excavation, e.g: Minor road works and table drain maintenance.
- Where the works do not pose a threat of exposure or strike to the pipeline, such as:
 - ✓ Installation of road signs or fence posts completed with a vacuum excavator,
 - ✓ Where suitable barricading is in place.
 - ✓ Surveyors & Locators
 - ✓ Temporary Large Vehicles (Non-Road Legal)
- **PROCESS:** Undertake a BYDA search (or contact Paul Caruana), complete the Works Request Form (Verbrec). Email to ThirdPartyWorks@verbrec.com (provide a minimum of 5 business days' notice)

Y mandatory

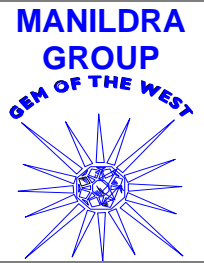
Major Works Approval

Major works are:

- Where the works pose a threat of exposure, damage, or strike to the pipeline, such as
 - ✓ Installation of new above or below ground infrastructure
 - ✓ Excavations which result in exposure of the pipeline
 - ✓ Permanent Heavy Vehicle Crossings (Non Road Legal) greater than 10 tonnes.

Y mandatory

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<p>✓ Excavations greater than 300mm and up to 15 metres from gas pipeline markers. <i>Note: The gas pipeline is located within the 10 metre gas easement, not necessarily in centre. Off easement is the area outside the easement line extending to 15 metres from the gas pipeline markers either side.</i></p>	
<p>Major Works Approval Process:</p> <ol style="list-style-type: none"> 1. Undertake a BYDA search (or contact Paul Caruana), complete the Works Request Form (Verbrec). 2. Provide drawings and work methodology. 3. Undertake a risk assessment for the works with Verbrec representative present. 4. Positively identify the pipeline (min 5 business days' notice) if required to confirm depths for crossing methodology. 5. Arrange date and time to provide permit/supervision. Email to ThirdPartyWorks@verbrec.com (provide a minimum of 20 business days' notice) 6. Positively identify pipeline if not previously done on construction 	<p>Y <input type="checkbox"/> mandatory</p>
<p>Emergency Works – In the event of an emergency e.g. burst water main over the pipeline, contact Verbrec control room. NO approval process required. Repair work will be supervised by a Verbrec representative. A Manildra excavation permit is still required.</p>	<p>Y <input type="checkbox"/> mandatory</p>